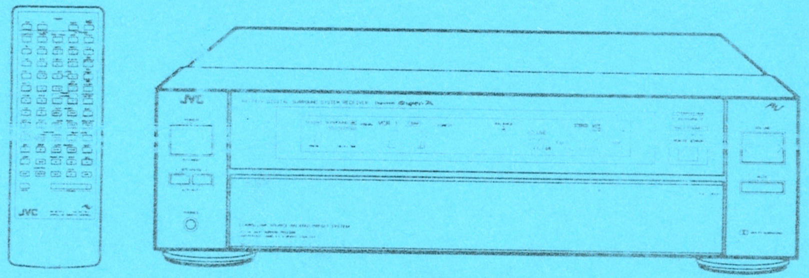
JVC

SERVICE MANUAL

DIGITAL SURROUND SYSTEM RECEIVER

RX-701VBK
MODEL No. RX-701VLBK



RX-701VBK

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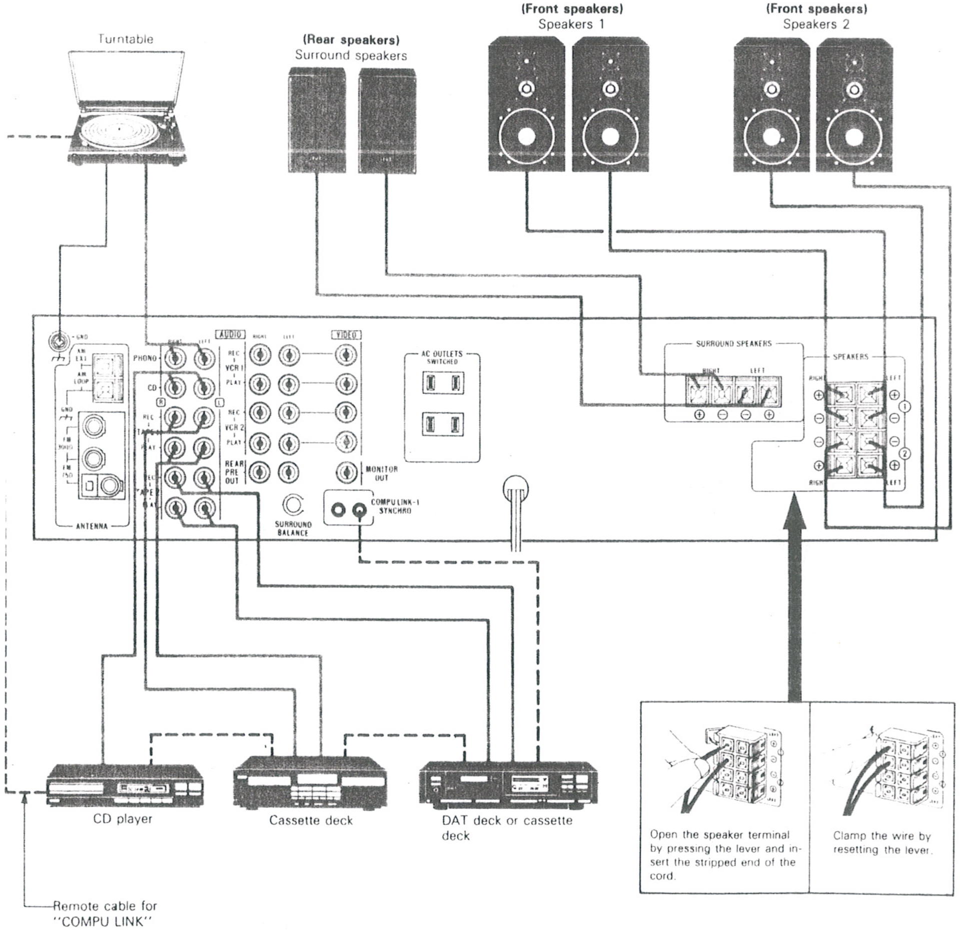
No. 20092
Mar. 1989

CONNECTION DIAGRAM

Switch the power off when connecting any cables.

Connections of Audio Components

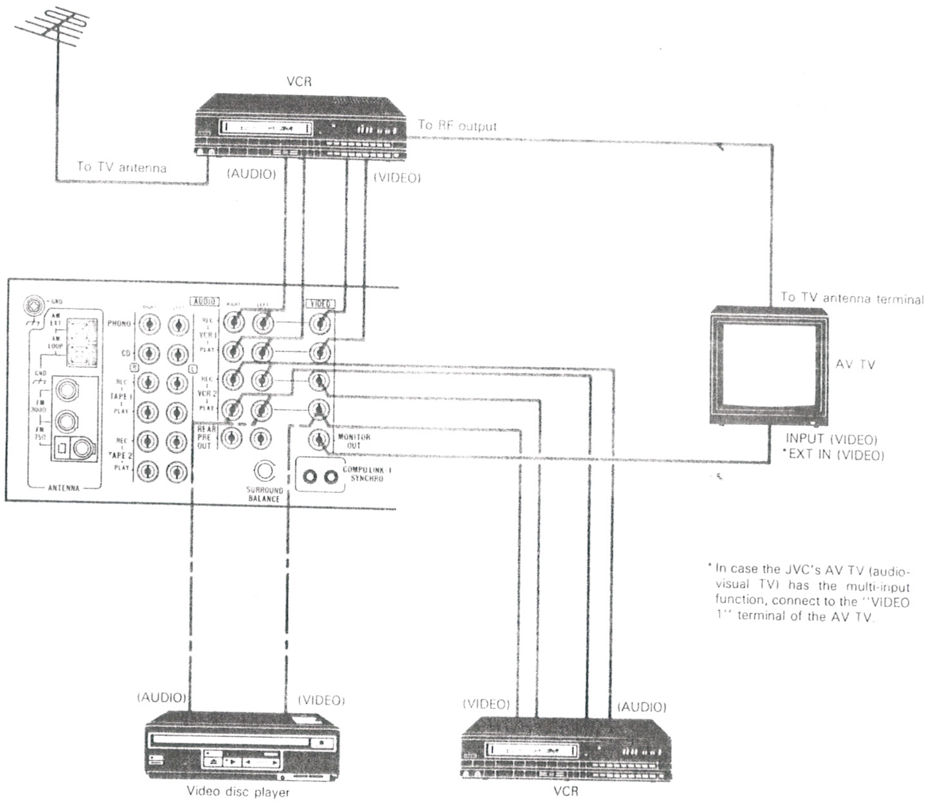

Turntable
(Rear speakers)
Surround speakers
(Front speakers)
Speakers 1
(Front speakers)
Speakers 2
GND
AM EXT
AM LOOP
FM 300Ω
FM 75Ω
ANTENNA
AUDIO
RIGHT
LEFT
VIDEO
PHONO
CD
REC
TAPE 1
PLAY
TAPE 2
VCR 1
VCR 2
REAR PRE OUT
MONITOR OUT
COMPU LINK-1 SYNCHRO
SURROUND BALANCE
AC OUTLETS SWITCHED
SURROUND SPEAKERS
SPEAKERS
①
②
CD player
Cassette deck
DAT deck or cassette deck
Remote cable for "COMPU LINK"

Open the speaker terminal by pressing the lever and insert the stripped end of the cord.

Clamp the wire by resetting the lever.

Connections of Video Components

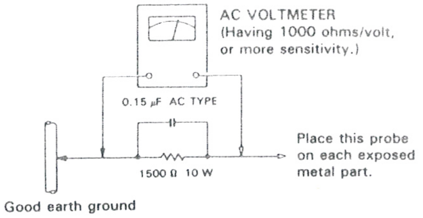
- Since mutual interference between video and audio components can cause noise and distorted pictures, you are recommended to use coaxial cable for the TV/video antenna.


VCR
To RF output
To TV antenna
(AUDIO)
(VIDEO)
To TV antenna terminal
AV TV
INPUT (VIDEO)
*EXT IN (VIDEO)
ANTENNA
PHONO
CD
TAPE 1
TAPE 2
VCR 1
VCR 2
REAR PRE OUT
MONITOR OUT
COMPU LINK-1 SYNCHRO
SURROUND BALANCE
(AUDIO)
(VIDEO)
(VIDEO)
(AUDIO)
Video disc player
VCR

* In case the JVC's AV TV (audio-visual TV) has the multi-input function, connect to the "VIDEO 1" terminal of the AV TV.

Safety Precautions

1. The design of this product contains special hardware and may circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15 μF AC TYPE
1500 Ω 10 W
Place this probe on each exposed metal part.
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

SPECIFICATIONS

AMPLIFIER SECTION

Output power : (CD IN → SP. OUT)	
2-channel Operation	: **(For the U.S.A. and Canada)** **100 watts per channel, minn. RMS, both channels driven into 8 ohms from 20 Hz to 20 kHz, with no more than 0.007% total harmonic distortion** 100 watts per channel, min. RMS, both channels driven into 8 ohms at 1 kHz, with no more than 0.003%** total harmonic distortion (Except for the U.S.A. and Canada) 80 watts per channel, min. RMS' both channels driven into 8 ohms from 20 Hz to 20 kHz, with no more then 0.007% total harmonic distortion 80 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz (DIN) 100 watts per channel, min. RMS, both channels driven, into 8 ohms at 1 kHz with no more than 0.003%** total harmonic distortion.
4-channel operation Front channel	**70 watts per channel, min. RMS, both channels driven into 8 ohms from 20 Hz to 20 kHz, with no more than 0.007% total harmonic distortion** 70 watts per channel, min. RMS, both channels driven into 8 ohms at 1 kHz (DIN)
Rear channel	: 12 watts per channel, min, RMS, both channels driven into 8 ohms at 1 kHz, with no more than 0.7%** total harmonic distortion
Total harmonic distortion	: 0.003%** at 80 watts (1 kHz, 8 ohms)
Intermodulation distortion	(For the U.S.A. and Canada) 0.007% at 8 watts (Except for the U.S.A. and Canada) 0.007% at 75 watts
Input sensitivity/impedance	
PHONO	: 2.5 mV/47 k ohms
TAPE 1 PLAY, TAPE 2 PLAY, CD, VCR 1 PLAY, VCR 2 PLAY	: 200 mV/47 k ohms
Recording output level	: 200 mV
Frequency response	
PHONO (RIAA equalization)	: 20 Hz – 20 kHz ±0.5 dB
CD, TAPE 1, TAPE 2, VCR 1 VCR 2	: 5 Hz – 50 kHz +0 dB/-1 dB
S.E.A. graphic equalizer	
Center frequencies	: 63 Hz, 160 Hz, 400 Hz, 1 kHz, 2.5 kHz, 6.3 kHz, 16 kHz
Control range	: ±10 dB
Signal-to-noise ratio	
PHONO	: 71 dB ('66 IHF), 78 dB ('78 IHF), 66 dB (DIN)
CD, TAPE 1, TAPE 2, VCR 1, VCR 2	: 100 dB ('66 IHF), 85 dB ('78 IHF), 67 dB (DIN)

FM TUNER SECTION

	IHF	DIN (For Europe)
Tuning range	: 87.5 MHz – 108.0 MHz	87.5 MHz – 108.0 MHz
Usable sensitivity	: Mono 10.8 dBf 0.95 μV/ 75 ohms 1.9 μV/ 300 ohms	–
26 dB quieting sensitivity	: –	1.5 μV/ 75 ohms 3 μV/ 300 ohms
50 dB quieting sensitivity	: Mono 16.3 dBf (1.8 μV/ 75 ohms 3.6 μV/ 300 ohms)	–
	Stereo 38.3 dBf (22.5 μV/ 75 ohms 45 μV/ 300 ohms)	–
S/N 46 dB stereo sensitivity	: –	Stereo 23 μV/ 75 ohms
Signal-to-noise ratio (at 98 MHz 85 dBf)	: Mono 81 dB Stereo 73 dB (IHF-A)	Mono 72 dB Stereo 64 dB (weighted)
Total harmonic distortion (1 kHz)	: Mono 0.15% Stereo 0.2%	Mono 0.1% Stereo 0.3%
Frequency response	: 30 Hz – 15 kHz, +0.5 dB, –3 dB	
Capture ratio	: 1.5 dB	
Selectivity	: 60 dB ±400 kHz	55 dB ±300 kHz
IF response ratio	: 85 dB at 98 MHz	
Stereo separation	: 40 dB at 1 kHz	40 dB at 1 kHz

AM TUNER SECTION

	EIA
MW	
Tuning range	: 522 kHz – 1.629 kHz Channel space 9 kHz 530 kHz – 1,630 kHz Channel space 10 kHz 530 kHz – 1,710 kHz (For U.S.A. and Canada)
Sensitivity	
Loop antenna	: 300 μV/m*
External antenna	: 30 μV*
Signal-to-noise ratio	: 50 dB* (100 mV/m)
Selectivity	: 38 dB, ±10 kHz 35 dB, ± 9 kHz*
Image response ratio	: 40 dB*
IF response ratio	: 60 dB
Total harmonic distortion	: 0.5%* (100 mV/m)
LW (RX-701VLBK only)	
Tuning range	: 144 kHz – 353 kHz
Sensitivity	
Loop antenna	: 600 μV/m at 245 kHz
External antenna	: 100 μV at 245 kHz
Signal to noise ratio (100 mV/m)	: 50 dB at 245 kHz
Selectivity	: 40 dB ±9 kHz at 245 kHz

VIDEO SECTION

Output signal level (VCR 1 REC, VCR 2 REC, MONITOR OUT)	: 1 Vp-p (at 1 Vp-p input)
Impedance	: 75 ohms, unbalanced
Synchronization	: Negative
Signal-to-noise ratio	: 45 dB
Crosstalk	: 45 dB (3.58 MHz)

GENERAL

Dimensions (W x H x D)	: 17-3/16" x 5" x 15-1/16" (435 x 126.5 x 381.5 mm)
Weight	: 24 lbs (10.9 kg)

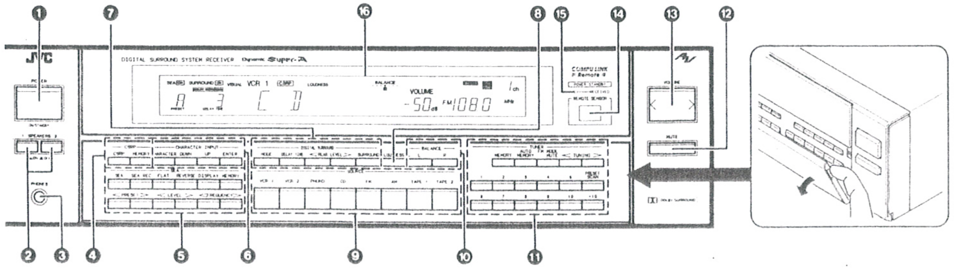
* Measured at 1,000 kHz or 999 kHz.
** Measured by JVC Audio Analysis System.

Design and specifications subject to change without notice.

Area	Line Voltage & Frequency	Power Consumption
U.S.A.	AC 120 V ~,60 Hz	310 w, 390 VA
Canada		
Continental Europe	AC 220 V ~ ,50 Hz	240 w
U.K.	AC 240 V ~ , 50 Hz	550 w
Australia		
Other Area	AC 110/120/220/240V ~ selectable, 50/60 Hz	240 w

FRONT PANEL

RX-701VBK/RX-801VBK



① POWER (ON/STANDBY)
Turns the power ON or activates the STANDBY mode.

STANDBY mode:
Preset data is retained in memory while the power cord is plugged into an AC outlet. If a power failure occurs or the cord is unplugged, data is retained for two or three days before memory is cleared.

Note:
A small amount of power (2 watts) is consumed in the STANDBY mode. To switch the power off completely, unplug the power cord.

② SPEAKERS 1, 2
Turns speakers 1 and 2 ON or OFF.

③ PHONES
Plug headphones into this jack. If you want to hear from the headphones alone, turn OFF speakers 1 and 2.

④ CSRP
COMPU LINK SOURCE RELATED PRESET SYSTEM feature (CSRP)

CSRP:	Turns the CSRP feature ON or OFF.
MEMORY:	Stores CSRP data in memory.

⑤ SEA
Use the following keys for the S.E.A. Graphic Equalizer:

SEA:	Turns the S.E.A. ON or OFF.
SEA REC:	Turns S.E.A. recording ON or OFF.
FLAT:	Flattens S.E.A. characteristics.
REVERSE:	Reverses polarity of the S.E.A. characteristics.
DISPLAY:	Displays S.E.A. patterns on the screen.
MEMORY:	Stores an S.E.A. pattern in memory.
PRESET <,>:	Calls an S.E.A. preset pattern.
LEVEL <,>:	Set an S.E.A. level.
FREQUENCY <,>:	Calls a frequency band to correct.

⑥ CHARACTER INPUT
Use the following keys to assign titles or other data to the S.E.A. patterns or to TUNER channels you have preset:

CHARACTER:	Sets the CHARACTER INPUT mode.
DOWN, UP:	Press to select characters (letters, numerals, and symbols).
ENTER:	Store created titles in memory.

⑦ DIGITAL SURROUND
Use these keys when you play back with a surround sound effect.

MODE:	Selects the surround mode.
DELAY TIME:	Sets the delay time of the rear speakers.
REAR LEVEL <,>:	Sets the output level of the rear speakers.
SURROUND:	Turns the surround sound effect ON or OFF.

⑧ LOUDNESS
Turns LOUDNESS ON or OFF. The ON position makes up for loss of the human auditory sensation when the sound volume is low.

⑨ SOURCE
Use the following keys to select sources:

VCR 1:	Press to operate video equipment connected to the VCR 1 terminals.
VCR 2:	Press to operate video equipment connected to the VCR 2 terminals.
PHONO:	Press to listen to records.
CD:	Press to listen to CDs.
FM:	Press to listen to FM broadcasts.
AM:	Press to listen to AM broadcasts.
TAPE 1:	Press to operate the tape deck connected to the TAPE 1 terminals.
TAPE 2:	Press to operate the tape deck connected to the TAPE 2 terminals. (alternates between ON and OFF)

⑩ BALANCE L, R
Adjusts the volume balance between the left and right speakers.

⑪ TUNER
Use the following keys to listen to AM or FM broadcasts:

MEMORY:	Stores an AM or FM frequency (station) on a preset channel.
AUTO MEMORY:	Stores an AM or FM frequency on a preset channel using the AUTO MEMORY feature.
FM MODE/MUTE:	Selects FM reception modes.
TUNING <,>:	Tunes in an AM or FM frequency.
1–10, +10 (Tuner numeric keys):	Press to select preset channels.
PRESET SCAN:	Press to scan preset channels in sequence.

⑫ MUTE
Turns sound ON or OFF temporarily.

⑬ VOLUME <, >
Adjusts the volume of sound from the speakers or headphones.

⑭ REMOTE SENSOR
Receives signals from the remote control unit.

⑮ RECEIVED and POWER STANDBY indicator
Lights when signals are received from the remote control unit or when the machine is in the STANDBY mode.

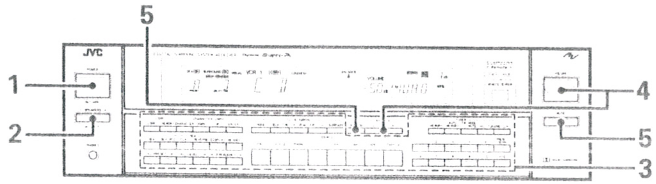
⑯ Display and indicator
Shows the operating status and the connected COMPU LINK equipment.

OPERATION

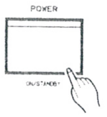
— Before Operating —

Before plugging the power cord into an AC outlet, check to be sure the individual components are connected correctly.

■ Basic operating procedures:

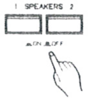


1. Turn the POWER switch to ON.



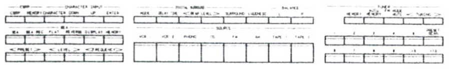
Note:
If a malfunction occurs when the power is ON, unplug the power cord and then plug it in again.

2. Select a speaker system by pressing one of the SPEAKERS keys.

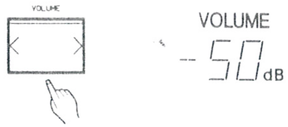


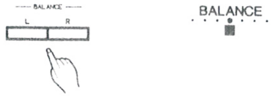
Note:
If speakers are not connected to both SPEAKERS 1 and 2 terminals, do not turn ON both speaker systems as that would suppress sound output.

3. Operate these keys, as needed, by following the directions given further on.



4. Adjust the VOLUME and BALANCE keys to your taste.





Note:
The sound volume rises as VOLUME reaches "0".
These keys vary their settings while they are being pressed.

5. Press the LOUDNESS and MUTE keys as needed.

- Press to make up for loss of the human auditory sensation when the sound volume is low.

LOUDNESS
LOUDNESS

- Press to temporarily cancel sound output.

Note:
The MUTE key is reset when the VOLUME or BALANCE keys are pressed.

REAR PANEL

❶ ANTENNA terminals
❷ GND terminal

AUDIO terminals: For audio signal connection

❸ PHONO terminals
❹ CD terminals
❺ TAPE 1 REC terminals
❻ TAPE 1 PLAY terminals
❼ TAPE 2 REC terminals
❽ TAPE 2 PLAY terminals
❾ VCR 1 REC terminals
❿ VCR 1 PLAY terminals
⓫ VCR 2 REC terminals
⓬ VCR 2 PLAY terminals
⓭ REAR PRE OUT terminals
To upgrade the rear speaker sound (to get more power), connect an amplifier to these terminals. In this case, disconnect the rear speakers from the SURROUND SPEAKERS terminals, and connect them to the speaker terminals of the rear channel amplifier. For connection and operations, refer to the instructions of the amplifier.

Notes:

- The VCR 1 and VCR 2 terminals can also be used to input audio signals from audio equipment.
- Do not connect the remote cable when connecting the JVC cassette deck having COMPU LINK-1/SYNCHRO terminals to the TAPE 2, VCR 1 or VCR 2 terminals.
- When a JVC DAT deck having COMPU LINK-1/SYNCHRO terminals is used, be sure to connect it to the TAPE 2 terminals and also connect the remote cable.
- Connect a turntables using a moving magnet (MM) type cartridges to the PHONO terminals.

VIDEO terminals: For video signal connection

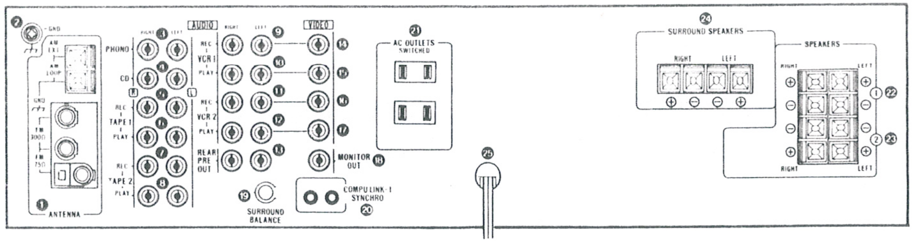
⓮ VCR 1 REC terminal
Connect a VCR's video in terminal to this.
⓯ VCR 1 PLAY terminal
Connect a VCR's video out terminal to this.
⓰ VCR 2 REC terminal
⓱ VCR 2 PLAY terminal
⓲ MONITOR OUT terminal
Connect the VIDEO MONITOR OUT terminal to an AV TV equipped with a video input terminal, to reproduce video signals.

Others:

⓳ SURROUND BALANCE
Refer to "Playing Back with a Surround-sound Effect," in the OPERATION section.
⓴ COMPU LINK-1/SYNCHRO terminals
Connect to units provided with COMPU LINK-1/SYNCHRO terminals for the COMPU LINK control system function.
㉑ AC OUTLETS (SWITCHED)
㉒ SPEAKERS 1 terminals
㉓ SPEAKERS 2 terminals
㉔ SURROUND SPEAKERS terminals
㉕ Power cord

Notes:

- When connecting components, connect their left and right channels correctly. If channels are reversed, the stereo effect will be degraded.
- Connect speakers with the correct polarity: (+) to (+) and (−) to (−). Reversed polarity will degrade the stereo effect. Be careful to prevent adjacent speaker wires from touching each other.
- Use speakers with the correct impedance. The correct impedance is indicated on the rear panel of the RX-701VBK/RX-801VBK.
- The AC OUTLETS do not supply power when the power switch is turned off. Do not connect equipment requiring more than the outlet's rated value.
- Keep connection cords as far as possible from the TV.



ANTENNAS

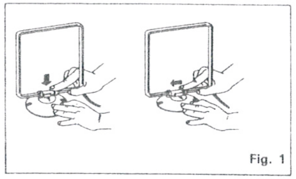


Fig. 1

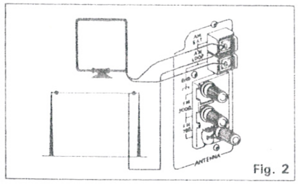


Fig. 2

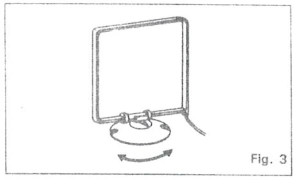


Fig. 3

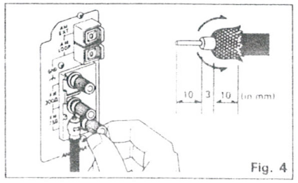


Fig. 4

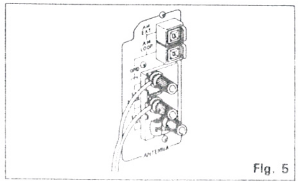


Fig. 5

AM antennas

Figure 1: How to fix the AM loop antenna

Figure 2: AM loop antenna

This antenna is for the reception of local AM broadcasts.

Figure 2: AM external antenna

If AM reception is unsatisfactory, connect an external AM antenna (single-wire antenna) to the AM ANTENNA terminal.

Figure 3: Noise and interference

Change the direction of the loop antenna, or re-install it in a better position if the reception is noisy.

Notes:

- If the provided loop antenna is not connected or an uninsulated antenna wire touches the rear panel, it will be impossible to receive AM broadcasts.
- When installing an external AM antenna, leave the AM loop antenna connected.

FM antennas

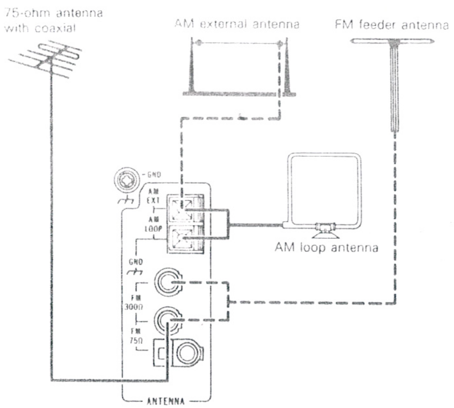
Figure 4: 75-ohm FM antenna with coaxial

Loosen the screws on the bracket and insert the cable through the ring from below. Connect the stripped core to the upper terminal then tighten the ring. The ring is the antenna ground.

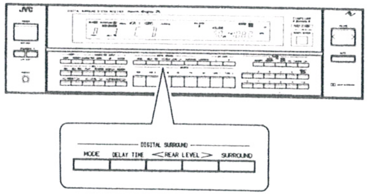
Figure 5: FM feeder antenna

Connect to the 300-ohm terminal. Make sure the feeder antenna wires do not touch any other terminals.

Antenna Connections

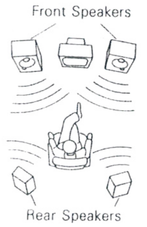


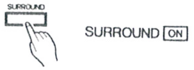
■ Playing Back with a Surround-sound Effect.



1. Connect the surround sound effect speakers to the SURROUND SPEAKERS terminals, and set the SURROUND key to ON.

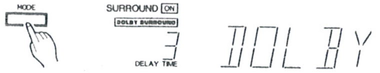
<Speaker layout example>





2. Set the surround mode with the MODE key.

<If you select DOLBY SURROUND>



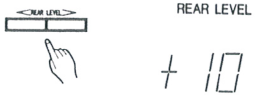
Each time you press the MODE key, the mode will change in the following order.

→ DOLBY SURROUND → HALL → STADIUM

- Select DOLBY SURROUND when you use video software with the DD[DOLBY SURROUND] mark.
  For ordinary stereo sources use HALL or STADIUM.
  DOLBY SURROUND: This mode produces a live three-dimensional acoustic effect such as the Dolby Surround Sound effect in movie theaters.
  HALL: Produces the expanding surround sound effect such as you would experience in a music hall.
  STADIUM: Provides the powerful dynamic surround sound effect of stadium music.

3. Play back the source.

4. Set the output level of the rear speakers using the REAR LEVEL keys.



Order < REAR LEVEL >

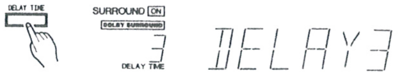
[−20]—[−18]—[−16] ····· [0] ····· [+16]—[+18]—[+20]

- The REAR LEVEL helps balance the sound with respect to the front speakers. Using 0 as the average value, you can set the level up to ±20. Select the setting you prefer as you listen to the source.

Note:
The display normally shows VOLUME. It will change to REAR LEVEL for about 5 seconds when the REAR LEVEL keys are pressed. The front and rear sound on Dolby Surround video software is already balanced for you. Therefore, to enjoy the most natural sound with the Dolby Surround Sound effect, do not raise the REAR LEVEL excessively.

5. Set the delay time for the rear speaker sound with respect to the front speaker sound using the DELAY TIME key.

<If you select "3">



Each time you press the key, the delay time changes in the following order:

→ 1 → 2 → 3 → 4 → 5

Setting advice:
Compare the distances between the front speakers and the listener and the rear speakers and the listener. The difference will help you to select the proper setting. Delay time varies from 1 to 5 with 3 as the average value.
If the position of the rear speakers, composed to the front speakers, is .....

very far ——→ set 1
somewhat far ——→ set 2
about the same ——→ set 3
somewhat close ——→ set 4
very close ——→ set 5

After you have made an initial setting, make additional adjustments while listening to the source sound.

Note:
The DELAY TIME is stored in each made until you make another change.

SURROUND BALANCE:
Depending on the source, you may not be able to enjoy the full effects of DOLBY SURROUND. In this case you must adjust the input signal balance using the SURROUND BALANCE knob on the rear panel. Normally, however, you should leave the knob in the center position.
If you feel that the left and right balance is not right when you play back with DOLBY SURROUND, make the following adjustments:

1. Play back a monaural source with DOLBY SURROUND still set.

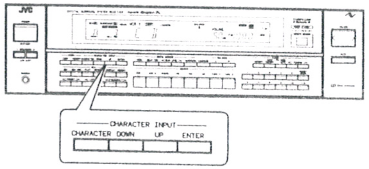
2. Adjust the SURROUND BALANCE knob so that the sound coming from the rear speakers is reduced to a minimum.

DOLBY SURROUND
Many video programs (video tapes and video discs) available today have a DD[DOLBY SURROUND] mark showing that they have been transcribed with the Dolby Stereo soundtrack left as it is. The soundtrack of these movies includes exactly the same surround sound information as the films you see in movie theaters. As the RX-701VBK/RX-801VBK incorporates a Dolby Surround decoder circuit, you can get a similar effect as in a movie theater equipped with Dolby Stereo, in your home. The RX-701VBK/RX-801VBK will turn your listening room into a home movie theater.

- Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. Numbers 3,632,886, 3,746,792 and 3,959,590; Canadian Numbers 1,004,603 and 1,037,877. "DOLBY" and double D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.

■ Entering Characters

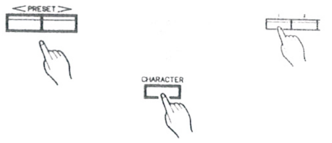
A five-character title or station name can be assigned to each S.E.A. preset pattern (SEA-A to E) or TUNER preset channel (CH-1 to 40).



1. Specify a S.E.A. manual preset pattern (SEA-A through E using the keys PRESET <and>), or a TUNER preset channel (using the numeric keys). Press the CHARACTER key.

<To specify a S.E.A. pattern>
Use the S.E.A. PRESET keys, <and>.

<To specify a Tuner Preset Channel>
Use the numeric keys.

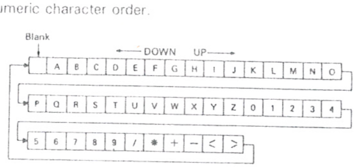


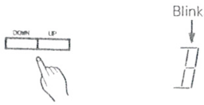
The cursor at the left blinks.
If a character has already been entered, the character blinks.

Note:
For details on S.E.A., see "Using the S.E.A. Graphic Equalizer".
When a preset S.E.A. pattern has been called, press the CHARACTER key while the pattern is displayed (about 5 seconds). If the display is cleared before you press the CHARACTER key, press either PRESET key.

2. Select the appropriate characters with the UP and DOWN keys.

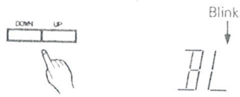
Alphanumeric character order.


Blank
← DOWN UP →
A B C D E F G H I J K L M N O
P Q R S T U V W X Y Z 0 1 2 3 4
5 6 7 8 9 / ✱ + − < >



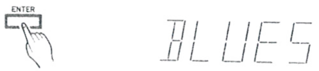
3. Press the CHARACTER key to move to the next position. Repeat steps 2 and 3 to enter up to 5 characters.

CHARACTER
Blinks

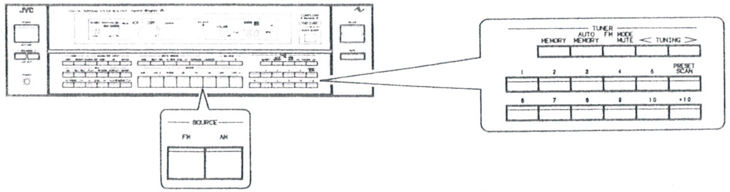


- To alter the characters, move the blinking cursor to the desired character for correction using the CHARACTER key.

4. When the entry is complete, press the ENTER key to store it in memory.

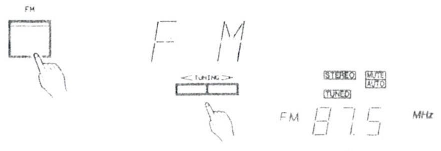


■ Listening to AM or FM Broadcasts



Press the AM or FM key and the TUNING keys to select a station, or press numeric keys to select a preset channel. (See "Presetting Stations")

<If you select FM>



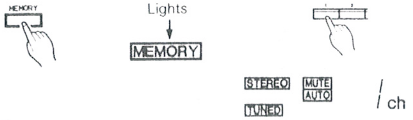
- The TUNED indicator will light when a station is tuned in correctly. Adjust the antenna if the indicator does not light.
- While tuning in an FM station, press the MODE/MUTE key to light the MUTE/AUTO indicator. This cuts out interstation noise while tuning. The STEREO indicator will light when an FM stereo station is tuned in correctly. If the FM stereo station is weak and noisy, press the MODE/MUTE key again to turn off the MUTE/AUTO indicator to improve reception (broadcast becomes monaural).

Note:
To select a station with the TUNING keys, press the FM or AM key first.
Each time the TUNING keys are pressed, the frequency is varied in steps of 10 kHz for AM and 100 kHz for FM. The setting will vary continuously while the keys are pressed and held. Auto-tuning starts when the keys are released and stops when a station is tuned. To halt auto-tuning, press a TUNING key.

— Presetting Stations —

You can preset a total of 40 AM and FM stations (CH-1 through CH-40).

1. Tune in the desired station with the TUNING keys.
2. Press the MEMORY key to light its indicator. Enter the channel number with numeric keys while the indicator is on (for about 5 seconds).



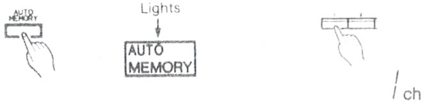
Note:
If the indicator turns off before you enter the channel number, press the MEMORY key again.

3. Repeat this procedure to preset other channels.

Auto-memory

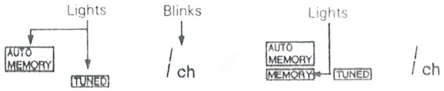
The auto-memory feature scans frequencies upward and presets stations as they are tuned, in ascending channel number order.

1. Using the TUNING keys, select the frequency from which you want auto-memory to start (the lower-limit frequency).
2. Press the AUTO MEMORY key to light its indicator. Enter the starting channel number with the numeric keys while the indicator is on (about 5 seconds).



Note:
If the indicator turns off before you enter the channel number, press the AUTO MEMORY key again.

3. The auto-memory feature starts scanning frequencies upward. The TUNED indicator will light when a station is tuned, with the channel number blinking (for about 5 seconds). The presetting is complete when the MEMORY indicator is lit. This continues until the upper-limit frequency is reached or all 40 channels are filled.



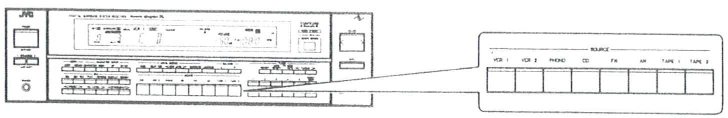
Note:
If you do not want to preset a station, resume scanning by pressing the AUTO MEMORY key while the channel number is blinking. To halt the auto-memory feature, press any TUNER key other than the AUTO MEMORY key.

Using Numeric Keys
To indicate numbers 1 through 10, simply press the appropriate keys.
To indicate numbers over 10, press the appropriate combination of keys.
Examples:
To indicate 17, press "+10", then "7".
To indicate 20, press "+10", then "10".
To indicate 26, press "+10" twice, then "6".
To indicate 40, press "+10" three times, then "10".

PRESET SCAN

The PRESET SCAN key is convenient for locating desired channels. When this key is pressed, the preset channels are scanned upward in sequence. Each channel is received for about 4 seconds while the corresponding channel number blinks. When the desired channel is located, press the PRESET SCAN key again to stop scanning. Scanning ends when one cycle of 40 channels is completed. The receiver returns to the station tuned in prior to the start of scanning.

■ Playing Back Sources (VCR 1, VCR 2, PHONO, CD, TAPE 1, TAPE 2)



Press the SOURCE key for the desired source, and operate the corresponding equipment.

<If you select CD>

CD player can be operated.

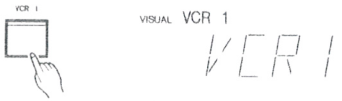
- Pressing the TAPE 2 key will not change the display source indication, but the TAPE 2 MONITOR lights. To play another source, press the TAPE 2 key again to turn off the indicator.

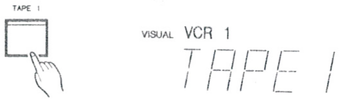
Note:
To operate other source equipment, refer to the appropriate instructions.

■ Listening to Another Audio Source While Watching VCR 1 or VCR 2

Press either the VCR 1 or VCR 2 key, and then press the key of the desired audio source.

<If you wish to listen to TAPE 1 while watching VCR 1>





■ Recording

For recording, use the SOURCE keys as in "Playing Back Sources".

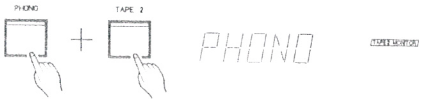
Press the SOURCE key for the desired source, and operate the corresponding source equipment and tape deck.

<If you select PHONO.>

PHONO
PHONO

Turntable and tape deck can be operated.

To monitor the recording by a three-head tape deck, connect the three-head tape deck to the TAPE 2 terminals beforehand. Press the appropriate SOURCE key and the TAPE 2 key, and operate the source equipment and three-head tape deck.



Turntable and three-head tape deck can be operated.

Note:
Set the recording level from the tape deck. It can not be set with the VOLUME control of this machine.

— Dubbing Tapes —

Connect the tape decks to the TAPE 1, TAPE 2, VCR 1 and VCR 2 terminals, as necessary.

<To record from TAPE 1 to TAPE 2>
1. Press TAPE 1.
2. Play back the TAPE 1 deck and record with the TAPE 2 deck.

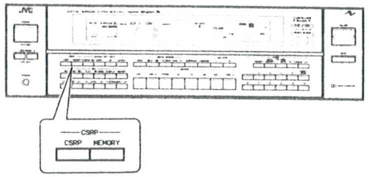
<To record from TAPE 2 to TAPE 1>
1. Press the TAPE 2 key and a SOURCE key other than TAPE 1.
2. Play back the TAPE 2 deck and record with the TAPE 1 deck.

- Dubbing can be similarly performed between TAPE 1, TAPE 2, VCR 1 and VCR 2. When dubbing from the TAPE 2 deck to another tape deck, press the TAPE 2 key together with the SOURCE key other than the tape deck.

RUNNING THE CSRP (COMPU LINK SOURCE RELATED PRESET SYSTEM) FEATURE.

CSRP is the state-of-the-art electronic feature that presets volume, balance, and other control settings. This was previously done manually each time a different source was played back. This feature lets you invoke preset control settings by simply pressing a SOURCE key or calling up a TUNER preset channel without repeating many settings each time sources are changed.

Operation



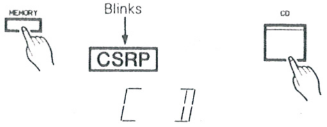
1. Before proceding, set the preset state.

The following controls can be preset on each SOURCE key (except TAPE 2) or TUNER preset channel:

- VOLUME
- BALANCE
- LOUDNESS ON/OFF
- SEA ON/OFF
- S.E.A. preset pattern
- SURROUND ON/OFF
- SURROUND mode
- SURROUND DELAY TIME
- SURROUND REAR LEVEL

2. Press the MEMORY key to blink its indicator. Press either the SOURCE key you wish to preset (VCR 1, VCR 2, PHONO, CD or TAPE 1), or call up the TUNER preset channel (CH-1 through CH-40) using TUNER numeric keys while the indicator is blinking (about 5 seconds).

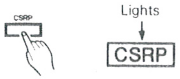
Repeat this operation for each additional source to be preset.



When the presetting is complete, the display will show preset data in the following order with the indicator blinking rapidly:
VOLUME, BALANCE, LOUDNESS ON/OFF → SEA ON/OFF, S.E.A. preset pattern → SURROUND ON/OFF, SURROUND mode, SURROUND DELAY TIME, SURROUND REAR LEVEL.

Note:
Press the MEMORY key again if the indicator stops blinking before you press a SOURCE key or calling up a TUNER preset channel.
Sources can be preset regardless of whether the CSRP key is ON or OFF, but when a source is to be preset with the CSRP key OFF, do not turn it ON until the presetting is complete. If the CSRP key were turned ON before the presetting is complete, the current data settings would be recalled to override the presetting in progress.
Even with the SEA key ON, the SEA PRESET indicator will blink when the MEMORY key is pressed if an S.E.A. preset pattern has not been previously selected. In this case, select an S.E.A. preset pattern and retry this operation.

3. When the CSRP key is ON, preset data is recalled each time a source or TUNER preset channel is selected.



- When the CSRP key is turned ON the display will show the data settings on the currently selected SOURCE key or TUNER preset channel in sequence with the indicator blinking rapidly. The blinking indicator changes to a continuously lit state when the display is complete. Subsequently, a similar display occurs each time an additional source is selected.

Note:
Though data settings as recalled can be changed with control keys as usual, preset data cannot be altered. To alter preset data, perform the operation described in 1 and 2.
The current preset data is displayed in sequence when the power is turned on with the CSRP key ON.

COMPU LINK REMOTE CONTROL SYSTEM

JVC's exclusive "COMPU LINK" remote control system connects equipment with JVC COMPU LINK-1/SYNCHRO terminals to the remote control system. The equipment can be controlled from the remote control unit, or other functions (such as automatic source selection and synchronized recording) can be used.

■ Equipment remote control

JVC Compu Link equipment functions that can be controlled remotely include:

CD player	: PLAY, STOP, AUTO SEARCH, TRACK NO. SELECT
CD auto-changer	: PLAY MODE (CONTINUE, PROGRAM, MAGAZINE PROGRAM), DISC NO. SELECT, TRACK NO. SELECT
Cassette deck	: PLAY, STOP, MUSIC SCAN, DIRECTION, FAST FORWARD, REWIND, PAUSE, RECORD
DAT deck	: PLAY, STOP, AUTO SEARCH, TUNE NO. SELECT, FAST FORWARD, REWIND, PAUSE, RECORD
Turntable	: START, STOP

In addition, JVC's audio-visual equipment (such as VCRs and TVs) can also be controlled remotely. For further details, see the remote control unit description in this instructions.

■ Automatic source selection

Pressing SOURCE keys will automatically put the corresponding source equipment into the PLAY mode. When the PLAY key on source equipment is pressed, the corresponding SOURCE key is automatically set to that source. Other source equipment shuts down about 5 seconds later.

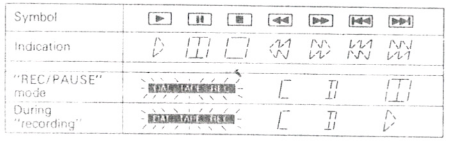
Note:
Automatic source selection does not work on the DAT deck connected to the TAPE 2 terminals.

■ Synchronized recording

Synchronized recording permits a tape deck to start recording automatically in synchronism with a CD player or turntable. Set the tape deck in the REC/PAUSE mode and press the PLAY key on the CD player or turntable. The tape deck will enter the recording mode automatically, starting synchronized recording.
Synchronized recording stops automatically after the CD player or turntable has stopped and the tape deck has entered the REC/MUTE mode for about 4 seconds.

Notes:
- To set the REC/PAUSE mode, press the REC and the PAUSE key at the same time. Synchronized recording is disabled if the PAUSE key is pressed after the REC and the PLAY key are pressed simultaneously. For details, refer to the tape deck instructions.
- If the power for any connected equipment is shut off during synchronized recording, the system will not operate properly. In this case, you must start all over again.
- During synchronized recording the SOURCE key will lock in either the CD or PHONO position. This is to prevent you from accidentally stopping the recording or changing to any other source. To change to another source you must first stop synchronized recording.
- You cannot switch the CSRP ON and OFF during synchronized recording.
- If you connect a cassette deck to the TAPE 2 terminals, disconnect the remote control cable and do not use synchronized recording.
- If you program track numbers on a CD player or CD auto-changer and use synchronized recording, a blank space about 4 seconds long will be left between recordings. This permits music scanning.

Display examples
When using the remote control unit to operarte equipment which has the COMPU LINK-1/SYNCHRO terminals, the name of the source and the operating mode will appear on the display.



USING THE S.E.A. GRAPHIC EQUALIZER

The S.E.A. Graphic Equalizer breaks down the audible frequency range into seven bands. Each band of tones can then be adjusted as desired by the listener (±10dB in steps of 2 dB on the basis of 0dB). You can customize the sound to your taste or ideally correct subtle frequencies to suit the acoustic characteristics of your listening room or conditions of audio equipment.

Frequency band responses

63 Hz: Raise to emphasize the very low base response of organs, drums, and contrabass. When used for emphasis, it produces stable and solid sound; when de-emphasized, eliminates unclear response at low frequencies.

160 Hz: Empahsize to obtain a more expanded low sound. De-emphasize to eliminate unclear sound caused by large or nearly empty listening rooms.

400 Hz: This frequency range is the base on which music is constructed. Emphasize to put real punch in your music.

1 kHz: Most effective in emphasizing or de-emphasizing the human voice. Emphasize to cause the vocalist to be brought to the foreground, or de-emphasized to fade into the background.

2.5 kHz: The human hearing is most sensitive to this frequency. If the music sounds hard or metallic, de-emphasize it.

6.3 kHz: Boost to add clarity to winds and strings. This frequency band varies the tonal expression, influencing the subtleties of the music.

16 kHz: Boosting this frequency range suitably adds to the delicacy of highs, with cymbals and triangles resounding in a more ear-pleasing manner, and provides a feeling of extension. This frequency band can also be used to compensate for cartridge response since most moving-magnet cartridges have resonance peaks in the frequency range from 10 kHz to 20 kHz.

S.E.A. preset patterns

A total of 10 preset patterns can be used: 5 programmed preset patterns, and 5 manual patterns which you create (SEA-A through E).

— Program pattern features —

These five S.E.A. patterns were preset at the factory to offer suggested settings for various types of audio programs. Each preset pattern is shown below. After recalling these patterns, you can further change each frequency band to suit yourself. However, since they are representative patterns, the original, stored pattern will be unchanged.

HEAVY:
Used for music with a heavy beat, such as rock music. Low frequencies are emphasized to produce a deeper, more powerful sound. Higher frequencies are also emphasized to enhance and bring clarity to the highs, including the percussive notes.

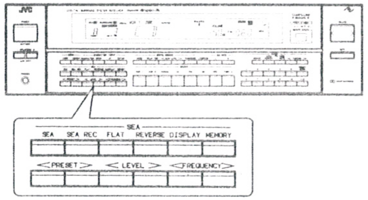
CLEAR:
For crisp, clear sound with transparent highs. The low and middle frequencies that tend to be unclear are de-emphasized, and the middle and high frequencies that strengthen the vocal component of the music are emphasized.

SOFT:
For background music. The very low frequencies, which need boosting at low volume levels, are mephasized, and the stimulating effect of higher frequencies is diminished by de-emphasizing high frequencies.

MOVIE:
For TV, VCR, and videodisc sound. The low and high frequencies, which are usually of insufficient strength in the sound of these sources, are empahsized to produce a balanced, deeper sound. Also, the excessive brightness that is characteristic of these sources' sound is cut back by de-emphasizing the middle frequency band.

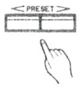
VOCAL:
For music that is chiefly vocal, or speech. The middle frequencies, which carry the human voice, are emphasized, while surrounding frequencies are reduced. To accent the higher vocal notes, the highest frequencies are also boosted.

S.E.A. Operation



1. Press the SEA key.

2. Call a preset pattern with the PRESET keys. (Bypass this operation if not using a preset pattern.)



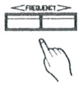
The PRESET indicator lights when a preset pattern has been called.

SEA ON
F
PRESET
HEAVY

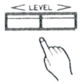
Order
< PRESET >
"SEA"—[SEA-A]—[SEA-B]—[SEA-C]—[SEA-D]—
[SEA-E]—[HEAVY:F]—[CLEAR:G]—
[SOFT:H]—[MOVIE:I]—[VOCAL:J]—

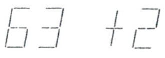
3. Press the FREQUENCY keys to call the desired frequency, and correct it with the LEVEL keys. (Bypass this operation if you are not changing the preset pattern called in step 2.)

   Repeat this operation for each additional frequency desired.



Order
< FREQUENCY >
[63Hz]—[160Hz]—[400Hz]—[1kHz]—
[2.5kHz]—[6.3kHz]—[16kHz]—



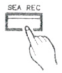


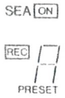
Order
< LEVEL >
[−10dB]—[−8dB]—[−6dB]—[−4dB]—[−2dB]—[0dB]—
[+2dB]—[+4dB]—[+6dB]—[+8dB]—[+10dB]

Note:
When a frequency has been called, press the LEVEL keys while the frequency is displayed (about 5 seconds). If the display is cleared before you press the LEVEL keys, it can be recalled by pressing either FREQUENCY key.

4. Press the SEA REC, FLAT, REVERSE, and DISPLAY keys as needed.

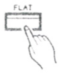
- Press the SEA REC key to record the sound corrected by S.E.A. on the tape deck connected to the TAPE 1, VCR 1 or VCR 2 terminals.





  S.E.A. recording is not available with the tape deck connected to the TAPE 2 terminals. The SEA REC key is not functional when the SEA key is OFF.

- Press the FLAT key to flatten the S.E.A. characteristics.



  Pressing the FLAT key while a pattern is yet to be preset will clear it. Be careful not to press the FLAT key inadvertently.

- Press the REVERSE key to reverse the polarity of S.E.A. characteristics. Press again to return to the original polarity.

  The S.E.A. pattern is displayed in ascending frequency after this display.

- Press the DISPLAY key to display the current S.E.A. pattern in ascending frequency.

  The S.E.A. pattern is displayed in ascending frequency order after this display (for a preset pattern, its title).

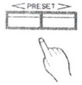
To stop the display, press DISPLAY again.

— Presetting Manual Patterns —

Up to 5 of the S.E.A. patterns (SEA-A through E) can be preset.

1. Create an S.E.A. pattern to preset as instructed in "Operation".
2. Press MEMORY key to blink its indicator. Call one of the patterns (SEA-A through E) by pressing the PRESET keys while the indicator is blinking (about 5 seconds).

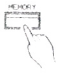
SEA ON
MEMORY
Blinks

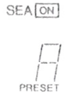


Order
< PRESET >
[SEA-A]—[SEA-B]—[SEA-C]—[SEA-D]—[SEA-E]—

Note:
Press the MEMORY key again if the indicator stops blinking before you press the PRESET keys.

3. Press the MEMORY key again while the indicator is blinking (about 5 seconds). Memory presetting is complete when the MEMORY indicator stops blinking and the PRESET indicator is lit.





Patterns are displayed in ascending frequency after this display

Preset Pattern Frequency Responses (Unit: dB)

Frequency band / Preset pattern	63Hz	160Hz	400Hz	1kHz	2.5kHz	6.3kHz	16kHz
HEAVY	+10	+2	−2	0	0	+2	+4
CLEAR	+4	−4	0	+4	+2	+4	+6
SOFT	+2	0	0	0	0	−2	−6
MOVIE	+6	+2	0	0	−2	0	+2
VOCAL	−2	−2	+2	+4	+2	0	+2
SEA-A							
SEA-B							
SEA-C							
SEA-D							
SEA-E							

Note: To assign titles to the preset patterns, see "Entering Characters"

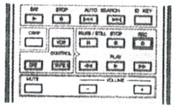
OPERATION WITH THE REMOTE CONTROL UNIT (RM-SR701U/RM-SR801U)

- The RM-SR701U and the RM-SR801U remote control units control the RX-701BK/RX-801BK and JVC's audio visual gear from a remote place via the Compu Link Remote Control System. Depending on the function in operation, the RM-SR801U can also receive and use the signal of another remote control unit.
- Direct the transmitter window of the remote control unit at target equipment within a distance of 7 meters. Take care to avoid obstacles between the transmitter and the target. Press keys slowly and positively, making sure the desired functions result.
- The key markings on the remote control unit may not match those on the equipment. Check the markings.
- The remote control units cannot control equipment functions they do not support. Older equipment may not be receptive to their input.
- Check for connection of the COMPU LINK-1/SYNCHRO terminals on the remote equipment by a remote cable.
- The operation of each key on the remote control unit is clearly displayed on the RX-701VBK or RX-801VBK.
  For specific procedures, refer to the instructions for the particular equipment.
- Switch on the power to all the equipment required before starting operation. The POWER key on the RM-SR701U/RM-SR801U can switch on the power to the AUDIO (RX-701VBK/RX-801VBK), TV, and VCR.

■ Operating the RX-701VBK/RX-801VBK and other Source Equipment

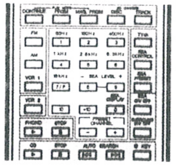
- Aim the signals at the REMOTE SENSOR on the RX-701VBK and RX-801VBK.

Using the VOLUME, MUTE and CSRP Keys.



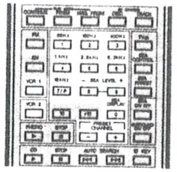
- VOLUME −, +
  Adjust the volume by processing the minus key to lower the sound and the plus key to raise the sound.
- MUTE
  Press ON to turn off the sound temporarily. Press again to OFF, or operate the VOLUME key, to turn on the sound again.
- CSRP
  Press to operate CSRP. Press again to turn CSRP off.

Listening to FM/AM Broadcasts



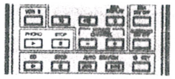
1. Press the FM or AM key to select the source.
2. Use the numeric keys and PRESET CHANNEL keys to select the preset channel mode on the TUNER. In tuning in stations with PRESET CHANNEL keys, make sure that the channel display is updated each time a key is pressed. The numeric keys are used in the same way as the TUNER numeric keys on the equipment. For reference, see "Listening to AM or FM Broadcasts" under the section OPERATION at the beginning of this instructions.

Using a VCR (1 or 2)



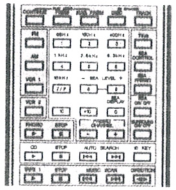
1. Press either the VCR 1 or VCR 2 key.
2. Operate the VCR.
3. If you press the VCR 1 key, the numeric keys and PRESET CHANNEL keys switch to the mode of the VCR channel numbers. These keys may be used in different ways depending on the VCR model, so be sure to refer to the instructions for your VCR.
   When selecting channels be sure to aim the remote control unit at the VCR.

Listening to Records



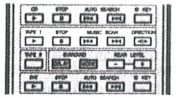
1. Press the PHONO [▶] key to start playing a record.
2. Press the STOP [■] key to stop the record.

Listening to CDs



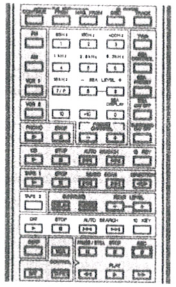
1. Press the CD [▶] key to start playing a CD.
2. Press the STOP [■] key to stop the CD.
   Use the AUTO SEARCH [⏮] and [⏭] keys to go to the beginning of other channels. Press the 10 KEY key to set numeric keys in the CD track number mode. The operation of these keys may vary according to the CD player you use, so be sure to refer to the CD player instructions.

Using a Cassette Deck



1. Press the TAPE 1 [▶] key to start the cassette deck.
2. Press the STOP [■] key to stop the cassette deck. Use the MUSIC SCAN [⏮] and [⏭] keys to go to the beginning of other channels. Use the DIRECTION [◁▷] key to change the direction of the tape.

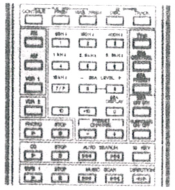
Listening to DAT



1. After pressing the TAPE 2 key and going on the TAPE 2 MONITOR indicator, press the DAT [▶] key to start the DAT deck.
2. Press the STOP [■] key to stop the DAT deck. Use the AUTO SEARCH [⏮] and [⏭] keys to go to the beginning of other channels. Press the 10 KEY key to set numeric keys in the DAT tune number mode. The operation of these keys may vary according to the DAT deck you use, so be sure to refer to the DAT deck instructions.

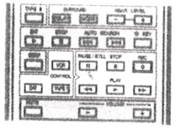
Note:
When the DAT deck is not in use, press the TAPE 2 key again to turn it OFF.

Using the CD Autochanger



1. Select a play mode by pressing the PLAY MODE CONTINUE, PRGM, or MAG.PRGM key.
2. Press the DISC key to use numeric keys for entering disc numbers. Select a disc number with the [1] to [7/P] keys.
3. Press the TRACK key to use numeric keys for entering track numbers. Select a track number with the [1] to [10], [+10], and [0] keys. The numeric keys and the play modes vary in function from one type of CD auto-changer to another. Be sure to read the CD auto-changer's instructions.

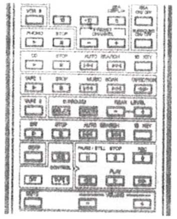
Using the CONTROL keys



Use the following keys to operate a VCR, DAT deck, or cassette deck.

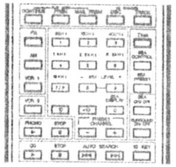
1. Press [VCR], [DAT] or [TAPE 1] to select the equipment you wish to operate.
2. Use the VCR, DAT, or TAPE1 control keys to select the operation you wish. Refer to the section "㉛ VCR/DAT/TAPE1 Controls" for the REMOTE CONTROL UNIT, and to the instructions for each type of equipment before operating these keys.
   Note:
   When operating a VCR be sure to aim the remote control unit at the VCR. When you set a cassette deck or DAT deck to the recording mode, the DAT/TAPE REC indicator will light up for about 3 seconds.

Using Synchronized Recording



1. Press the [TAPE 1] key.
2. Press the REC [●] and PAUSE/STILL [⏸] keys simultaneously to place the tape deck in the REC/PAUSE mode.
3. Press the PHONO [▶] or CD [▶] key to start synchronized recording.
4. Press the STOP [■] key to stop synchronized recording.

Using the S.E.A. graphic equalizer

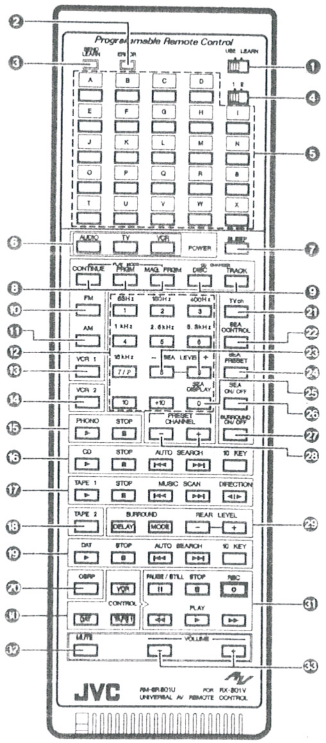


1. Press the SEA ON/OFF key.
2. Select a preset pattern with the SEA PRESET key. The pattern will change in the following order each time the SEA PRESET key is pressed:
   → [SEA-A] → [SEA-B] → [SEA-C] → [SEA-D] → [SEA-E] →
   [HEAVY:F] → [CLEAR:G] → [SOFT:H] → [MOVIE:I] → [VOCAL:J]
3. To correct a frequency, press the SEA CONTROL key, call the frequency with the 63 Hz [1] to 16 kHz [7/P] keys, and correct the frequency with the SEA LEVEL − [8] and + [9] keys.
4. Press the SEA DISPLAY key and the current S.E.A. pattern will be displayed in ascending frequency order.

Note:
See "Using the S.E.A. graphic equalizer" in the Operation section.

REMOTE CONTROL UNIT (RM-SR701U/RM-SR801U)

RM-SR801U


Programmable Remote Control
①
②
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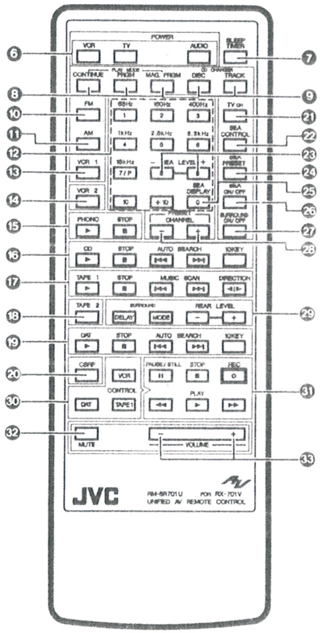
JVC
RM-SR801U UNIVERSAL AV REMOTE CONTROL
FOR RX-801V

RM-SR701U



RM-SR801U only:
The RM-SR801U can receive and use a maximum of 48 signals from other remote control units.

① **USE/LEARN**
Use to select the operation mode USE or LEARN.
Set the USE mode for normal use and the LEARN mode when you need to receive and store many signals.

② **ERROR (Red) Indicator**
Lights up to confirm that the learn operation has been completed, or to indicate an operation error.

③ **SEND/LEARN (Green) Indicator**
Acts as a SEND indicator in the USE mode and lights up when signals have been sent. Acts as the LEARN indicator in the LEARN mode and indicates the learn operation status.

④ **1/2**
Use to select the learning key mode 1 or 2. Both modes, 1 and 2, can be used with each of the 24 keys, A to X, for a total of 48 keys.

⑤ **Learning keys**
Use to store signals from other remote control units.

Both RM-SR701U and RM-SR801U:

⑥ **POWER**
AUDIO: Press to change the power for the RX-701VBK/RX-801VBK to ON or STANDBY.
TV: Press to change the TV power to ON or OFF.
VCR: Press to change the VCR power to ON or OFF.

⑦ **SLEEP TIMER (SLEEP)**
Use this control when you want to set the SLEEP TIMER.

⑧ **PLAY MODE**
Use these keys when operating a CD auto-changer:
CONTINUE: Play CDs in sequence.
PRGM: Play a CD in a programmed sequence.
MAG. PRGM: Play a magazine program.

⑨ **CD CHANGER**
DISC: Press to set numeric keys in the CD autochanger disc number mode.
TRACK: Press to set numeric keys in the CD autochanger track number mode.

⑩ **FM**
Press to listen to FM broadcasts.

⑪ **AM**
Press to listen to AM broadcasts.

⑫ **Numeric keys (0, 1 through 10, +10)**
Use to select the following numbers:
- FM/AM preset channel numbers
- CD auto-changer disc and track numbers
- CD player track numbers
- DAT deck tune numbers
- VCR channel numbers
- TV channel numbers

63 Hz — 16 kHz: Frequency is displayed when S.E.A. is used.

⑬ **VCR 1**
Use to change the source to VCR 1.

⑭ **VCR 2**
Use to change the source to VCR 2.

⑮ **PHONO**
PHONO (▶): Use to change the source to PHONO and start playing a record.
STOP (■): Use to stop playing a record.

⑯ **CD**
CD (▶): Use to change the source to CD and start playing a CD.
STOP (■): Use to stop playing a CD.
AUTO SEARCH:
(⏮): Use to go to the beginning of the previous track.
(⏭): Use to go to the beginning of the next track.
10 KEY: Press to set numeric keys in the CD player track number mode.

⑰ **TAPE 1**
TAPE 1 (▶): Use to change the source to TAPE 1 and begin playing back a cassette deck tape.
STOP (■): Use to stop the cassette deck.
MUSIC SCAN:
(⏮): Use to go to the beginning of the previous tune.
(⏭): Use to go to the beginning of the next tune.
DIRECTION (◀▶): Use to change the director of the tape.

⑱ **TAPE 2**
Press when you want to play back or monitor the recording on a tape deck connected to the TAPE 2 terminals. (alternates between ON and OFF)

⑲ **DAT**
DAT (▶): Use to play back a DAT deck tape.
STOP (■): Use to stop the DAT deck.
AUTO SEARCH:
(⏮): Use to go to the beginning of the previous tune.
(⏭): Use to go to the beginning of the next tune.
10 KEY: Press to set numeric keys in the DAT deck tune number mode.

⑳ **CSRP**
Turns CSRP ON or OFF.

㉑ **TV ch**
Use the numeric keys to select TV channel modes.

㉒ **SEA CONTROL**
Press to operate S.E.A. Use the numeric keys to control the S.E.A. operation modes.

㉓ **SEA LEVEL (– 8, + 9)**
Use to set the S.E.A. level.

㉔ **SEA PRESET**
Use to select S.E.A. preset patterns.

㉕ **SEA DISPLAY**
Use to display the S.E.A. setting.

㉖ **SEA ON/OFF**
Turns the S.E.A. feature ON or OFF.

㉗ **SURROUND ON/OFF**
Turns the SURROUND effect ON or OFF.

㉘ **PRESET CHANNEL (–, +)**
Increments (+) or decrements (–) the AM/FM preset channel or the TV/VCR channel numbers.

㉙ **SURROUND**
DELAY: Sets the delay time of the rear speakers.
MODE: Selects the surround mode.
REAR LEVEL (–, +): Sets the output level of the rear speakers

㉚ **CONTROL**
VCR: Press to run a VCR.
DAT: Press to run a DAT deck.
TAPE1: Press to run the TAPE 1 cassette deck.

㉛ **VCR/DAT/TAPE 1 controls**
These keys operate the equipment selected with the CONTROL key.
PAUSE/STILL (❚❚): Stops play back, sound recording, and video recording temporarily. Press the PLAY key to release this control.
STOP (■): Stops the operation selected.
REC (●): Starts sound and video recording when pressed together with the PLAY key. When pressed together with the PAUSE/STILL key, sound and video recording are placed in standby.
(◀◀): Fast winds the tape in a cassette deck to the left. Rewinds a DAT deck and VCR tapes.
PLAY (▶): Plays the tape.
(▶▶): Fast winds the tape in a cassette deck to the right. Fast forwards DAT deck and VCR tapes.

㉜ **MUTE**
Turns sound ON or OFF temporarily.

㉝ **VOLUME (–, +)**
Use to adjust the volume of sound from the speakers or headphones.

■ Inserting Batteries in the Remote Control Unit

Use the following batteries:
RM-SR701U: AA (1.5V) x 2
RM-SR801U: AAA (1.5V) x 4
Use long-life dry cells in the RM-SR801U.

Figure 1:
Remove the rear cover of the remote control unit.

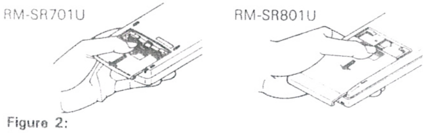


Figure 2:
Insert the batteries.

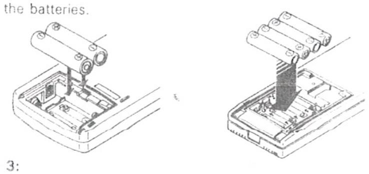
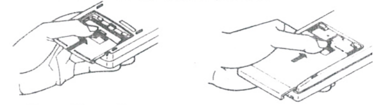


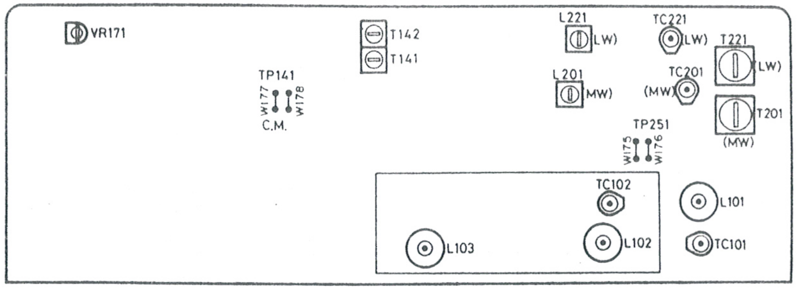
Figure 3:
Re-attach the rear cover in the original position.



Important Notes About Batteries
- With the RM-SR801U, do not allow more than 3 minutes for battery replacement to preserve stored data.
- If the range of the remote control unit seems shortened, the batteries may be old. Try inserting new batteries.
- Observe the polarity of batteries when loading them.
- Do not use one new battery with one old battery.
- Be sure to use batteries of the same brand. Batteries may vary in voltage even though they look alike.
- If the remote control unit will not be used for a long time, remove the batteries.

CAUTION:
Do not heat batteries or attempt to dispose of them by burning.

FM/MW/LW Tuner Alignment Procedures



■ Front-end Section

FM oscillator coil: L103

1. Set the frequency display to "108.0 MHz" and the FM MODE switch to the "MONO" position.
2. Confirm the FM inter-station noise is received.
3. Adjust L103 so that the voltage of test point "TP251" becomes 8.3 V ± 0.1 V.
4. Set the frequency display to "87.5 MHz" and confirm that the output of test point "TP251" is 1.5–2.2 V.

FM antenna coil: L101, L102

5. Adjust L101 and L102 to obtain the maximum sensitivity at 89.9 MHz.

FM antenna trimmer: TC101, TC102

6. Adjust TC101 and TC102 to obtain the maximum sensitivity at 105.9 MHz.
7. Repeat the above adjustments of L101, L102, TC101 and TC102.

■ IF Detection and MPX

FM detector coil: T141, T142

1. Connect a center-meter or a digital voltmeter to test point "TP141 (W177-W178)", and receive to 100.1 MHz signal in the condition of SSG ATT 70 dB.
2. Adjust T141 so that the center-meter indicates "0" or the digital voltmeter reads 0 ± 1.5 mV.
3. At the same time, adjust T142 so that the distortion is minimized.

Stereo Separation: VR171 (for Continental Europe, U.K. and Australia)

4. Tune in a 98.1 MHz stereo signal.
5. Adjust VR171 so that the channel separation becomes maximum.

■ LW Section

LW oscillator coil: L221

1. Set the frequency display to 144 kHz.
2. Adjust L221 to obtain 1.0 ± 0.1 V at test point "TP251".
3. Set the frequency display to 353 kHz and confirm that the voltage at test point "TP251" is 7.2 V ± 1.2 V.

LW antenna coil: T221

4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T221 to obtain the best receiving sensitivity on 164 kHz.

LW antenna trimmer: TC221

6. Adjust TC221 to obtain the best receiving sensitivity on 353 kHz.
7. Repeat the above adjustments of T221, TC221.

Note: After this alignment, confirm the MW section alignment.

■ MW Section

Note: ( ); 9 kHz step, [ ]; 10 kHz step

MW oscillator coil: L201

1. Set the frequency display adjust L201 to obtain (522 kHz) [530 kHz] and confirm that the output of test point "TP251" is 1.1 V ± 0.1 V.
2. Set the frequency display to (1629 kHz) [1710 kHz] and confirm thst the output of test point "TP251" is (7.5 V ±0.8 V) [8.2 V ± 0.8 V.]
3. If its output is over 9 V at 1710 kHz, adjust L201 to obtain 9.0 V.

MW antenna coil: T201

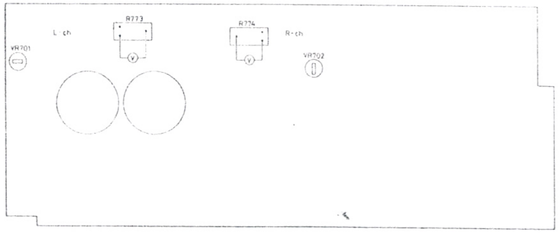
4. Connect a loop antenna to the "AM LOOP" terminal on the rear panel.
5. Adjust T201 to obtain the best receiving sensitivity on (603 kHz) [600 kHz].

MW antenna trimmer: TC201

6. Adjust TC201 to obtain the best receiving sensitivity on (1404 kHz) [1400 kHz].

Power Amplifier Adjustment Procedures

■ Idling Current Adjustment



1. Turn VR701 and VR702 fully counterclockwise before the power switch on.
2. Warm up at least 5 minutes before adjustment.
3. Must keep the heatsink to prevent overheating before adjustment.
4. Set the volume control to minimum during this adjustment.
5. Connect a DC voltmeter to R773 resistor's leads for left channel, or to R774 for right channel.
6. Adjust VR701 for left channel, or VR702 for right channel, so that the DC voltmeter becomes 5mV ±2mV.

■ Confirm the waveforms for surround effects

DOLBY

1. Provide a sine wave signal 20Hz,400mVp-p to the LEFT channel of CD input terminals.
2. Connect X-axis of oscilloscope to the input signal and Y-axis to the LEFT channel of REAR SPEAKER terminals.
3. Set the "DELAY TIME" to 1,2,3,4 and 5.
4. Adjust the REAR LEVEL & VOLUME controls to 400mV at the LEFT channel of REAR SPEAKER terminals.
5. Confirm the below waveform. (Fig-1,2,3,4 and 5)

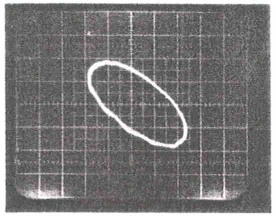


Fig-1

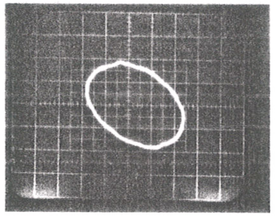


Fig-2

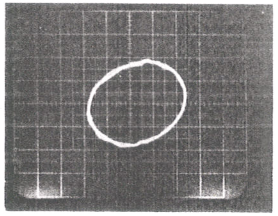


Fig-3

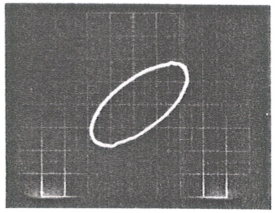


Fig-4

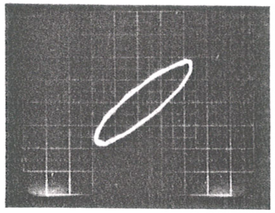
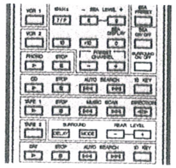


Fig-5

Using Surround-sound Playback



1. Press the SURROUND ON/OFF key.
2. Select the surround mode with the MODE key. Each time you press this key, the mode will change in the following order:

   → DOLBY SURROUND → HALL → STADIUM

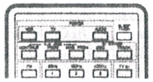
3. Set the delay time with the DELAY key. Each time you press this key, the time will change in the following order:

   → 1 → 2 → 3 → 4 → 5

4. Set the sound level of the rear speakers with the REAR LEVEL (−, +) keys.

Note:
See "Playing Back with a Surround-sound Effect" in the OPERATION section.

Using the Sleep Timer

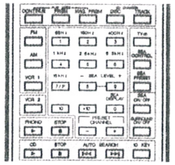


The sleep timer shuts off the RX-701VBK/RX-801VBK (to enter the STANDBY mode) when the preset time intervals have elapsed. Press the SLEEP TIMER (SLEEP) key to set the timer setting mode. Each time the SLEEP TIMER (SLEEP) key is pressed subsequently, the timer can be set up to 80 minutes, in 10-minute multiples. The preset time and the elapsed time are shown on the display.

■ Operating other Equipment

Aim signals at the equipment to be operated.

Selecting a TV Channel



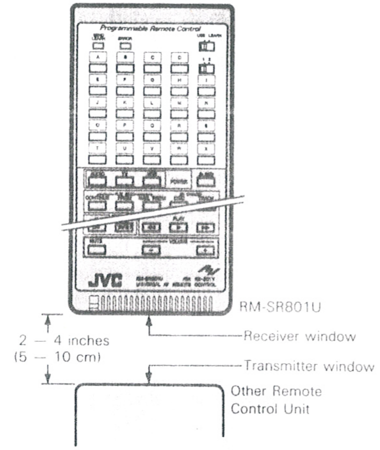
1. Press the TV ch key. The numeric keys and the PRESET CHANNEL keys enter the TV channel mode.
2. Select a TV channel with the numeric keys or the PRESET CHANNEL keys (−, +). The numeric keys vary in operation from one type of TV to another. Read the instructions accompanying the particular TV.

■ Storing the Signals of Another Remote Control Unit (RM-SR801U only)

The RM-SR801U can store and use up to 48 signals from other remote control units.

<For example: To store the PLAY function of another remote control unit in learning key A while in mode 1.>

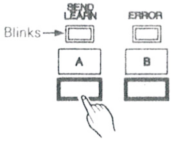
1. Place both remote control units on a flat surface. Be sure that the transmitter window of the other remote control unit is about 2 — 4 inches (5 — 10 cm) from the receiver window. If the units are too close or too far apart, signals may not be stored properly.



2. Set the mode of the learning key you want to use with the 1/2 switch, and set the USE/LEARN switch to LEARN.

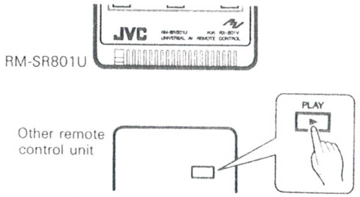
1 2
USE LEARN

3. Press and release the learning key (A to X) you want to use. When you press the key the SEND/LEARN indicator blinks for about 10 seconds.



- If the ERROR indicator lights when the SEND/LEARN indicator is blinking, the key you pressed already has a function stored in it. If you continue with the storing procedure, the previously stored information will be cleared and the new information will be stored instead. If you want to keep the previously stored information, select another learning key and press it.

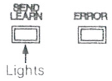
4. While the SEND/LEARN indicator is still blinking, press continuously the key you want to learn on the other remote control unit.



- During the learning operation both the SEND/LEARN indicator and ERROR indicator are lit. Press continuously the key on the other remote control unit while both indicators remain lit.

Note:
If the SEND/LEARN indicator stops blinking before you press the key on the other remote control unit, begin again from step 3.

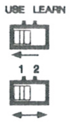
5. When learning is completed the ERROR indicator goes off but the SEND/LEARN indicator remains lit.

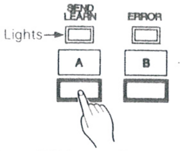


- If only the ERROR indicator is on learning was incomplete. In this case begin again from step 3.

Note:
Depending on the type of signal to be stored, both the ERROR and the SEND/LEARN indicator may go off at the end of the storing procedure, with only the SEND/LEARN indicator going on several seconds later. This indicates that the read signal is being internally processed.
Check that the SEND/LEARN indicator is off before starting next operations.

6. If you wish to use another learning key wait until both the SEND/LEARN and ERROR indicators go off. Then repeat the procedures in steps 3, 4 and 5 for the new key.
   If you wish to change the mode of the learning key, set the new mode with the 1/2 switch before starting step 3.
7. When you want to use the learning key you programmed, set the USE/LEARN switch to USE, set the mode with the 1/2 switch, and then press the key. If the correct signal is transmitted, the SEND/LEARN indicator will light up.



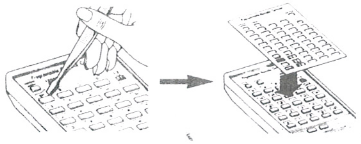


- If you press a learning key which has nothing programmed, the ERROR indicator will light up.

Note:
Even though there may have been no problems during the storing procedure, you may have trouble when you use the key, or when you try to use several keys consecutively. This is due to the fact that, depending on the type of equipment, a slight diference in the remote control signal may not be accepted by the receiver. In this case, repeat the learning procedure again.

IMPORTANT:
- If operations (such as learning) should become faulty or be disabled, try to remove the batteries, then reload.
- This unit can learn almost any remote control signal if the other unit is an infra-red type remote control unit. However, it may not be able learn special signals or very long signals. (If you repeat the learning procedure 3 or 4 times and the unit still does not operate properly, it may be due to this kind of problem.)
- If you press two or more learning keys simultaneously during an operation, the unit will not be able to send either signal.
  Example: If you stored the REC function in key A and the PLAY function in key B, and you press both at the same time, the unit will not send either signal.
  For operations which require pressing two keys together (e.g., REC + PLAY or REC + PAUSE), you must store both functions in the same learning key by pressing both function keys together on the other remote control unit.
- When you use the Recording function stored in a learning key, be sure you do not accidentally erase something already recorded on the tape.

Accessories:
The RM-SR801U cames with identification seals and a template. Apply the seals as shown in the illustration below.



TROUBLESHOOTING

What appears to be a malfunction is not always serious. First be sure to check basic adjustments.

No sound and no illumination.
Is the AC plug connected properly?
No sound from the speakers.
Are the speaker cords connected?
Are the SPEAKERS keys pressed?
Sound from one speaker only.
Are both speaker cords connected?
Is the BALANCE control set to one extreme or the other?
Continuous hiss or buzzing during FM reception.
The incoming signal may be to weak.
Use the correct antenna.
Occasional crackling noise during FM reception.
This may be automobile ignition noise. Move the antenna as far away from the road as possible.
Loud hum during record playing.
Is the turntable grounded?
Try to change the cord path.
Howling during record playing.
Is the turntable too close to a speaker?

LA3401 (IC171) : FM MPX Detector

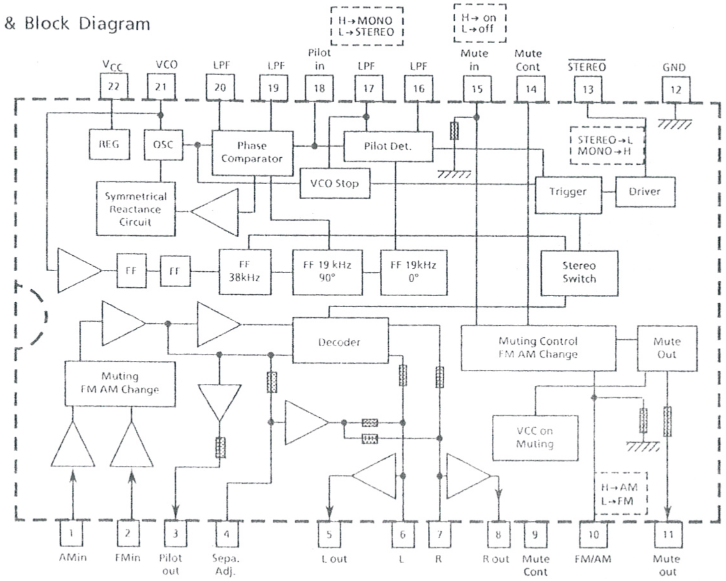
1. Characteristics

(1) Detection of FM Multiplex Signal (Stereo signal)

(2) When FM Signal is Stereo Modulation, it is output the signal for indicator.

(3) AM/FM Audio Amplifier

2. Top View & Block Diagram

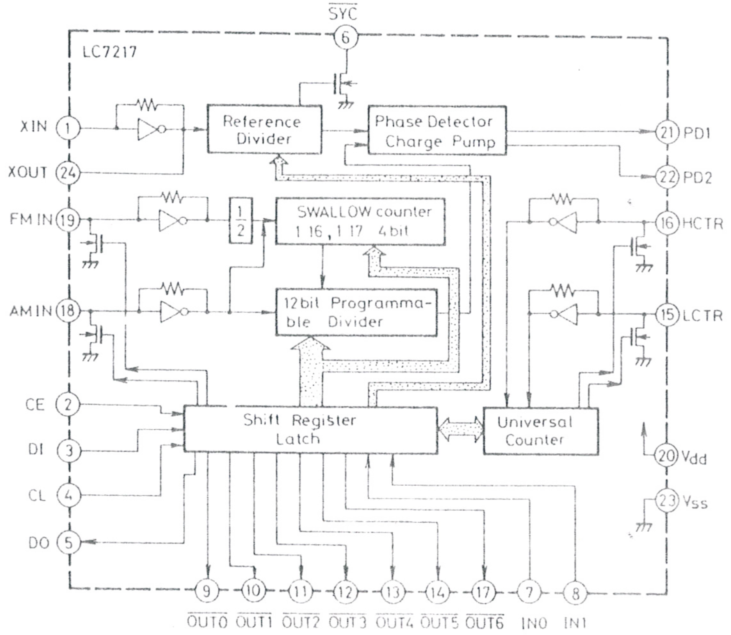

H→MONO
L→STEREO
H→on
L→off
V_{CC}
VCO
LPF
LPF
Pilot in
LPF
LPF
Mute in
Mute Cont
STEREO
GND
22
21
20
19
18
17
16
15
14
13
12
REG
OSC
Phase Comparator
Pilot Det.
VCO Stop
STEREO→L
MONO→H
Trigger
Driver
Symmetrical Reactance Circuit
FF
FF
FF 38kHz
FF 19 kHz 90°
FF 19kHz 0°
Stereo Switch
Decoder
Muting Control FM AM Change
Mute Out
Muting FM AM Change
VCC on Muting
H→AM
L→FM
1
2
3
4
5
6
7
8
9
10
11
AMin
FMin
Pilot out
Sepa. Adj.
L out
L
R
R out
Mute Cont
FM/AM
Mute out

(3) Pin Functions

Pin No.	Symbol	H/L	I/O	Functions and Operations
1	AM in			Input terminal for AM detection signal.
2	FM in			Input terminal for FM detection signal.
3	Pilot out			Output of MPX pilot signal (Connected to Pin18).
4	Sepa Adj.			Separation adjustment.
5	L. out		O	Left channel signal output
6	L		O	Reversal output of Pin5.
7	R		O	Reversal output of Pin8.
8	R out		O	Right channel signal output.
9	V_{CC} on mute			The muting time after power on is changed by the connected capacitor.
10	FM/AM		I	Switchover the FM/AM input. "H" :AM, "L" :FM
11	Mut out		O	Mute signal output.
12	GND			Ground terminal.
13	Stereo		O	Stereo indicator output.
14	Mut			The mute time at switchover the FM/AM is changed by the connected capacitor.
15	Mut in		I	Mute signal input. "H" :Mute on. "L" :Mute off
16	LPF			Lower pass filter of pilot detector.
17	LPF			VCO is stopped when it becomes "H".
18	Pilot in			PLL input.
19	LPF			Loop filter of PLL.
20	LPF			Loop filter of PLL.
21	VCO			Voltage controlled oscillator terminal.
22	V_{CC}			Power supply.

■ LC7218 (IC251): PLL Synthesizer

(1) Block Diagram


$\overline{SYC}$
6
LC7217
XIN 1
XOUT 24
FM IN 19
AM IN 18
CE 2
DI 3
CL 4
DO 5
Reference Divider
Phase Detector Charge Pump
21 PD1
22 PD2
1/2
SWALLOW counter 1/16, 1/17 4bit
16 HCTR
12bit Programmable Divider
15 LCTR
Shift Register Latch
Universal Counter
20 Vdd
23 Vss
9
10
11
12
13
14
17
7
8
$\overline{OUT0}$
$\overline{OUT1}$
$\overline{OUT2}$
$\overline{OUT3}$
$\overline{OUT4}$
$\overline{OUT5}$
$\overline{OUT6}$
IN0
IN1

HALL : DELAY TIME-3

1. Provide a sine wave signal 20Hz,400mVp-p to the LEFT channel of CD input terminals.
2. Connect X-axis of oscilloscope to the input signal and Y-axis to the LEFT channel of REAR SPEAKER terminals.
3. Set the "DELAY TIME" to 3.
4. Adjust the REAR LEVEL & VOLUME controls to 400mV at the LEFT channel of REAR SPEAKER terminals.
5. Confirm the below waveform. (Fig-6)

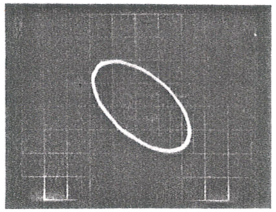


Fig-6

HALL : DELAY TIME-3

1. Provide a sine wave signal 20Hz,400mVp-p to the RIGHT channel of CD input terminals.
2. Connect X-axis of oscilloscope to the input signal and Y-axis to the RIGHT channel of REAR SPEAKER terminals.
3. Set the "DELAY TIME" to 3.
4. Adjust the REAR LEVEL & VOLUME controls to 400mV at the RIGHT channel of REAR SPEAKER terminals.
5. Confirm the below waveform. (Fig-7)

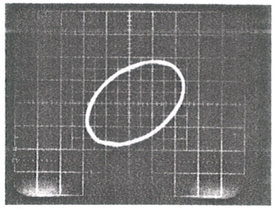


Fig-7

Stadium : DELAY TIME-3

1. Provide a sine wave signal 20Hz, 400mV p-p to the RIGHT channel of CD input terminals.
2. Connect X-axis of oscilloscope to the input signal and Y-axis to the RIGHT chnannel of REAR SPEAKER terminals.
3. Set the "DELAY TIME" to 3.
4. Adjust the REAR LEVEL & VOLUME controls to 400mV at the RIGHT channel of REAR SPEAKER terminals.
5. Confirm the below waveform. (Fig-8)

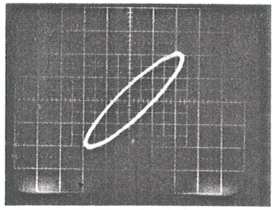


Fig-8

Stadium : DELAY TIME-3

1. Provide a sine wave signal 20Hz, 400mV p-p to the LEFT & RIGHT channels of CD input terminals.
2. Connect X-axis of oscilloscope to the input signal and Y-axis to the RIGHT channel of REAR SPEAKER terminals.
3. Set the "DELAY TIME" to 3.
4. Adjust the REAR LEVEL & VOLUME controls to 400mV at the right channel of REAR SPEAKER terminals.
5. Confirm the below waveform. (Fig-9)

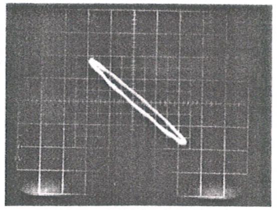


Fig-9

Internal Block Diagrams of ICs

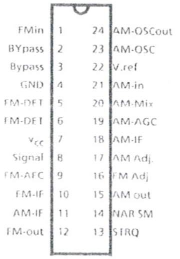
LA1266A (IC101) : FM AM IF AMP & DETECTOR

1. Characteristics

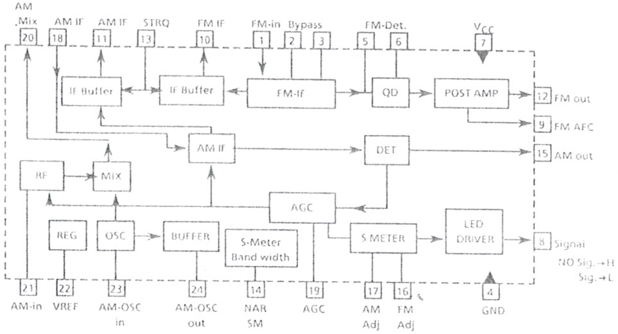
(1) Amplify and detection of FM intermodulation frequencies.

(2) Local oscillator and mixer for AM and amplify the AM-IF signal.

2. To View


FMin 1
BYpass 2
Bypass 3
GND 4
FM-DET 5
FM-DET 6
V_{cc} 7
Signal 8
FM-AFC 9
FM-IF 10
AM-IF 11
FM-out 12
24 AM-OSCout
23 AM-OSC
22 V.ref
21 AM-in
20 AM-Mix
19 AM-AGC
18 AM-IF
17 AM Adj.
16 FM Adj
15 AM out
14 NAR SM
13 STRQ

3. Block Diagram

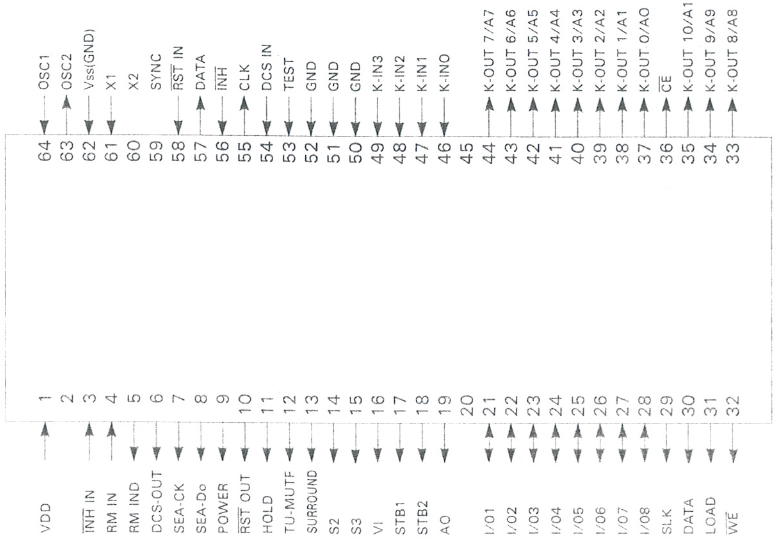

AM .Mix
20
AM IF
18
AM IF
11
STRQ
13
FM IF
10
FM-in
1
Bypass
2
3
FM-Det.
5
6
V_{CC}
7
IF Buffer
IF Buffer
FM-IF
QD
POST AMP
12 FM out
9 FM AFC
AM IF
DET
15 AM out
RF
MIX
AGC
REG
OSC
BUFFER
S-Meter Band width
S METER
LED DRIVER
8 Signal
NO Sig.→H
Sig.→L
21 AM-in
22 VREF
23 AM-OSC in
24 AM-OSC out
14 NAR SM
19 AGC
17 AM Adj
16 FM Adj
4 GND

4. Pin Functions

Pin No.	Symbol	H/L	I/O	Functions and Operations
1	FM in		I	Input terminal of FM IF Signal.
2,3	By Pass			By Pass of FM IF Amp.
4				This is the device ground terminal.
5,6	FM DET			FM detector transformer.
7	CC			Power supply terminal.
8	SIG			No use.
9	FM AFC		O	Output terminal of voltage for FM - AFC.
10	FM IF out		O	When the signal of IF Request of iC251 (LC7218) applies to pin13, the signal of FM IF is output.
11	AM IF out		O	When the signal of IF Request of iC251 (LC7218) applies to pin13, the signal of FM IF is output.
12	FM out		O	FM detection output.
13	STRQ		I	The IF-signals come out from pin10(FM-IF) or pin11(AM-IF) when it becomes "H".
14	NAR SM			Control the Band-width of signal meter.
15	AM out		O	AM detection output.
16	FM Adj			For adjust the stop level (or mute level) of FM.
17	AM Adj			For adjust the stop level (or mute level) of AM.
18	AM IF		I	Input of AM IF Signal.
19	AMAGC		I	AGC Voltage Input Terminal for AM.
20	AMMIX		O	Output terminal for AM mixer.
21	AM IN		I	Input terminal for AM RF Signal.
22	V. REF			
23	AM OSC			Terminal of AM Local oscillation circuit.
24	AM OSC out		O	AM Local Oscillation Signal output.

■ MN17581 JSX2 (IC 461): System Controller

(1) Top View


OSC1
OSC2
Vss(GND)
X1
X2
SYNC
$\overline{\text{RST}}$ IN
DATA
$\overline{\text{INH}}$
CLK
DCS IN
TEST
GND
GND
GND
K-IN3
K-IN2
K-IN1
K-INO
K-OUT 7/A7
K-OUT 6/A6
K-OUT 5/A5
K-OUT 4/A4
K-OUT 3/A3
K-OUT 2/A2
K-OUT 1/A1
K-OUT 0/AO
$\overline{\text{CE}}$
K-OUT 10/A10
K-OUT 9/A9
K-OUT 8/A8
64
63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
VDD
$\overline{\text{INH}}$ IN
RM IN
RM IND
DCS-OUT
SEA-CK
SEA-Do
POWER
$\overline{\text{RST}}$ OUT
HOLD
TU-MUTF
SURROUND
S2
S3
VI
STB1
STB2
AO
I/01
I/02
I/03
I/04
I/05
I/06
I/07
I/08
SLK
DATA
LOAD
$\overline{\text{WE}}$

(2) Pin Functions

Pin No.	Pin Name	I/O	Functions and Operations
1	VDD		Voltage Supply (+5V)
2			NONE
3	$\overline{\text{INH}}$ IN	I	Inhibit Signal input
4	RM IN	I	Remote Control input
5	RM IND	O	Turning ON/OFF to Received/stand by LED
6	DCS OUT	O	Compu-Link Signal output
7	SEA-CK	O	Serial clock output to SEA Volume (IC504)
8	SEA-DO	O	Serial Data output to SEA Volume (IC504)
9	POWER	O	TURN ON/OFF for AC Power Supply
10	$\overline{\text{RST}}$ OUT	O	Reset output for Tuner controller IC (IC421)
11	HOLD	O	Hold output for Tuner controller (IC421), FL driver (IC463) and Digital surround controller (IC631)
12	TU-MUTE	O	Tuner muting
13	SURROUND	O	Surround ON/OFF control
14	S2	O	Surround mode control H:DOLBY L:HALL or Stadium
15	S3	O	Surround mode control H:HALL L:DOLBY or Stadium
16	V1	O	VCR1,2 VI= H:VCR2, VI=L:VCR1
17	STB1	O	Strobe to main Volume (IC306) and function switches (IC302, IC581)
18	STB2	O	Strobe to Rear Volume (IC561)
19	AO	O	Data control output to surround controller (IC631)
20			

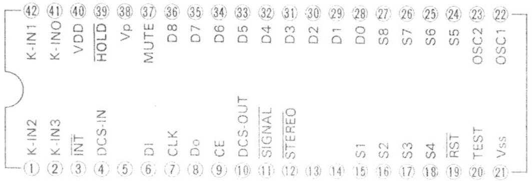
Pin No.	Pin Name	I/O	Functions and Operations
21	I/01	I/O	S. RAM (IC462) DATA in/out
22	I/02	I/O	S. RAM (IC462) DATA in/out
23	I/03	I/O	S. RAM (IC462) DATA in/out
24	I/04	I/O	S. RAM (IC462) DATA in/out
25	I/05	I/O	S. RAM (IC462) DATA in/out
26	I/06	I/O	S. RAM (IC462) DATA in/out
27	I/07	I/O	S. RAM (IC462) DATA in/out
28	I/08	I/O	S. RAM (IC462) DATA in/out
29	SLK	O	Serial clock output to FL driver (IC463)
30	DATA	O	Serial Data output to FL driver (IC463)
31	LOAD	O	Load output to FL driver (IC463)
32	$\overline{\text{WE}}$	O	Write Enable to S.RAM (IC462)
33	K-OUT 8/A8	O	Key matrix output and S.RAM (IC462) Address
34	K-OUT 9/A9	O	Key matrix output and S.RAM (IC462) Address
35	K-OUT 10/A10	O	Key matrix output and S.RAM (IC462) Address
36	$\overline{\text{CE}}$	O	Chip Enable to S.RAM (IC462)
37	K-OUT 0/A0	O	Key matrix output and S.RAM (IC462) Address
38	K-OUT 1/A1	O	Key matrix output and S.RAM (IC462) Address
39	K-OUT 2/A2	O	Key matrix output and S.RAM (IC462) Address
40	K-OUT 3/A3	O	Key matrix output and S.RAM (IC462) Address
41	K-OUT 4/A4	O	Key matrix output and S.RAM (IC462) Address
42	K-OUT 5/A5	O	Key matrix output and S.RAM (IC462) Address
43	K-OUT 6/A6	O	Key matrix output and S.RAM (IC462) Address
44	K-OUT 7/A7	O	Key matrix output and S.RAM (IC462) Address
45			
46	K-INO	I	Key matrix input
47	K-IN1	I	Key matrix input
48	K-IN2	I	Key matrix input
49	K-IN3	I	Key matrix input
50			No use, connect to GND
51			NO use
52			NO use
53	TEST	I	Test mode input
54	DCS IN	I	Compu-Link Signal input
55	CLK	O	Serial Clock output for Volumes (IC306, IC561), Function switches (IC302, IC581) and digital surround controller (IC631)
56	$\overline{\text{INH}}$	I	Inhibit Signal input
57	DATA	O	Serial Data output for Volume (IC306, IC561), Function switches (IC302, IC581) and digital surround controller (IC631)
58	$\overline{\text{RST}}$ IN	I	Reset Signal input
59	SYNC		NO use
60	X2		NO use
61	X1		NO use: Pull up to VDD
62	Vss		Connect to GND
63	OSC2		Connect to 7.2 MHz Resonator
64	OSC1		Connect to 7.2 MHz Resonator

2) Pin Functions

Symbol	Pin No.	Details	Functions	I/O
XIN XOUT	1 24	X'tal OSC	· Crystal oscillator (7.2 MHz)	I O
FM IN	19	Local oscillator signal input	· FM IN is selected for serial data input: DV = 1 is assigned. · Input frequency is 10～130 MHz (70 mVrms min.). · The signal passes through the built-in pre-scaler (1/2) and is transmitted to the swallow counter.	I
AM IN	18	Local oscillator signal input	· AM IN is selected for serial data input: DV = 0 is assigned. · When serial data is input: SP = 1 is assigned: · Input frequency is 2～40 MHz (70 mVrms min.). · The signal is transmitted to the swallow counter without passing through the built-in pre-scaler (1/2). · When serial data is input: SP = 0 is assigned: · Input frequency is 0.5～10 MHz (70 mVrms min.). · The signal is transmitted directly to the 12-bit programmable divider.	I
PD 1 PD 2	21 22	Charge pump output	· PLL charge pump output. · When the local oscillator signal frequency divided by N results in a frequency higher than the reference frequency, high level signals are output from PD 1 and PD 2. · When it is lower than the reference frequency, low level signals are output.	O
$\overline{\text{SYC}}$	6	Controller clock	· This is the controller clock output pin and a 400 kHz signal (duty 66%) is output after the power is turned ON.	O (N-ch open drain)
VDD	20	Power supply	· Power supply pin for LC7218. It supplies 4.5～6.5 V when the PLL circuit is activated.	–
Vss	23	Ground	· GND pin of LC7218.	–
CE	2	Chip enable	· This pin goes high when serial data is input (DI) to LC7218 or output from it.	I
CL	4	Clock	· This clock is used to synchronize data when serial data is input (DI) to or output (DO) from LC7218	I
DI	3	Input data	· Input pin for serial data which is transmitted from the controller to LC7218. · A total of 36 bits of data should be input for initialization.	I
DO	5	Output data	· Output pin for serial data transmitted from LC7218 to the controller. · A total of 28 bits can be output from the internal shift register in synchronized with CL.	O (N-ch open drain)
$\overline{\text{OUT 0}}$ $\overline{\text{OUT 1}}$ $\overline{\text{OUT 2}}$ $\overline{\text{OUT 3}}$ $\overline{\text{OUT 4}}$ $\overline{\text{OUT 5}}$ $\overline{\text{OUT 6}}$	9 10 11 12 13 14 17	Output port	· Latches O0～O6 of the serial data transmitted from the controller, and inverts the data to output it in parallel. · $\overline{\text{OUT 0}}$ can output the time base for clock (8 Hz). (When TB = 1.) · $\overline{\text{OUT 1}}$ and $\overline{\text{OUT 2}}$ are complementary outputs. · $\overline{\text{OUT 0}}$, $\overline{\text{OUT 3}}$, $\overline{\text{OUT 4}}$, $\overline{\text{OUT 5}}$ and $\overline{\text{OUT 6}}$ are N-ch open drain outputs (up to 13 V).	O
IN 0 IN 1	7 8	Input port	· The data at input ports IN 0, IN 1 is converted from parallel to serial, and can be output from output pin DO.	I
HCTR	16	General purpose measurement signal input pin	· With serial data input: SC = 1, HCTR is selected. · The signal is transmitted to the general-purpose counter (20-bit binary counter) via a 1/8 divider internally. · For this, the value of the general-purpose counter becomes 1/8 of the actual frequency which is input to the HCTR pin. · The measured results can be output from the MSB of the general-purpose counter via output pin DO.	I
LCTR	15	General purpose counter frequency input pin	· With serial data input: SC = 0, LCTR is selected. · At this time, if serial data is input: SF = 1; · The signal is transmitted directly to the general-purpose counter without passing through the internal 1/8 divider. · If serial data is input SF = 0: · Input frequency is 1 Hz ～20 kHz (VIH = 0.7 VDD min., VIL ≒ 0.3 VDD max.). · The measurement periods of 1-cycle and 2-cycle can be selected; when 2-cycle is selected, the input frequency is 2 Hz ～20 kHz. (GT = 1/0 : 2/1 period)	I

■ LC6514B-4054 (IC421): Tuner Controller

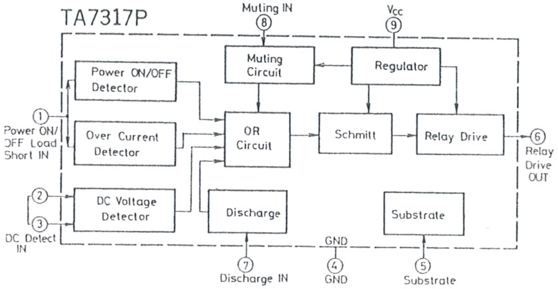
(1) Top View

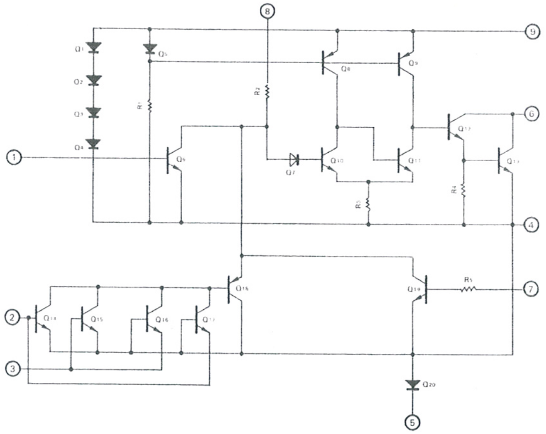


(2) Pin functions

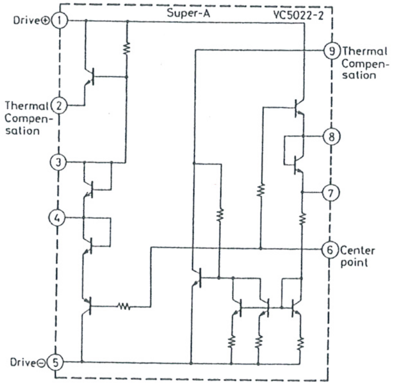
Pin No.	Pin Name	I/O	Functions and Operations
1	K-IN2		Key matrix input
2	K-IN3		Key matrix input
3	$\overline{\text{INT}}$		no use:connect to VDD
4	DCS-IN	I	Compu-Link Signal input
5			
6	D1	I	Serial Data input from PLL (IC251)
7	CLK	O	Serial clock output to PLL (IC251)
8	Do	O	Serial Data output to PLL (IC251)
9	CE	O	Chip Eable output to PLL (IC251)
10	DCS-OUT	O	Compu-Link Signal output
11	$\overline{\text{SIGNAL}}$	I	Broadcast receiving when "L" is input
12	$\overline{\text{STEREO}}$	I	FM Stereo reception when "L" is input
13			
14			
15	S1	O	Segment drive for FL Display
16	S2	O	Segment drive for FL Display
17	S3	O	Segment drive for FL Display
18	S4	O	Segment drive for FL Display
19	$\overline{\text{RST}}$	I	Reset signal input
20	TEST		no use:connect to Vss
21	Vss		Connect to GND
22	OSC1		IMHz Resonator
23	OSC2		IMHz Resonator
24	S5	O	Segment drive for FL Display
25	S6	O	Segment drive for FL Display
26	S7	O	Segment drive for FL Display
27	S8	O	Segment drive for FL Display
28	D0	O	Digit drive for FL Display and Key matrix output
29	D1	O	Digit drive for FL Display and Key matrix output
30	D2	O	Digit drive for FL Display and Key matrix output
31	D3	O	Digit drive for FL Display and Key matrix output
32	D4	O	Digit drive for FL Display and Key matrix output
33	D5	O	Digit drive for FL Display and Key matrix output
34	D6	O	Digit drive for FL Display
35	D7	O	Key matrix output
36	D8	O	Key matrix output
37	MUTE	O	Muting output
38	Vp		-39 V
39	$\overline{\text{HOLD}}$	I	Hold signal input
40	VDD		+ 5 V
41	K-INO	I	Key matrix input
42	K-IN1	I	Key Matrix input

■ TA7317P (IC901, IC981): PROTECTOR


TA7317P
Muting IN
8
Vcc
9
Muting Circuit
Regulator
Power ON/OFF Detector
OR Circuit
Schmitt
Relay Drive
Over Current Detector
DC Voltage Detector
Discharge
Substrate
1
Power ON/OFF Load Short IN
2
3
DC Detect IN
6
Relay Drive OUT
GND
7
Discharge IN
4
GND
5
Substrate

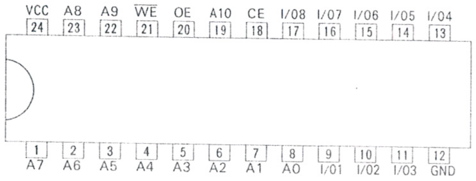


■ VC5022-2 (IC701, IC702): SUPER A


Super-A
VC5022-2
Drive⊕ 1
Thermal Compen-sation 2
3
4
Drive⊖ 5
9 Thermal Compen-sation
8
7
6 Center point

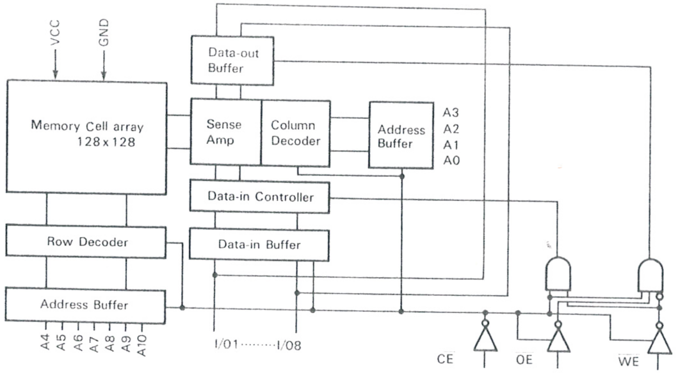
■ LC3517BS (IC462): C MOS Static Ram

(1) TOP VIEW

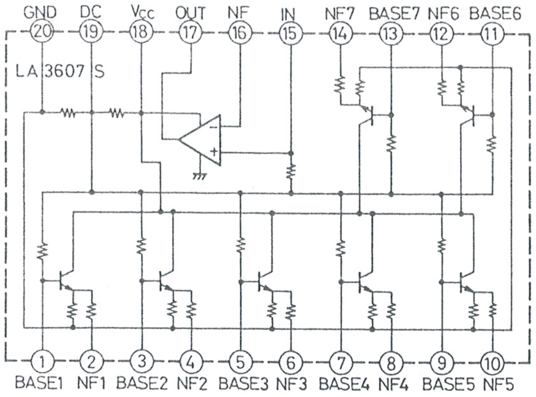

VCC 24
A8 23
A9 22
WE 21
OE 20
A10 19
CE 18
I/08 17
I/07 16
I/06 15
I/05 14
I/04 13
1 A7
2 A6
3 A5
4 A4
5 A3
6 A2
7 A1
8 A0
9 I/01
10 I/02
11 I/03
12 GND

A0-A10 : Address input
WE : Read write control input
OE : Output enable input
CE : Chip enable input
I/01~I/08 : Data input/output
VCC/GND : Power supply

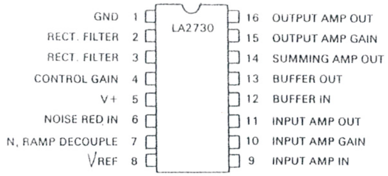
(2) Block Diagram

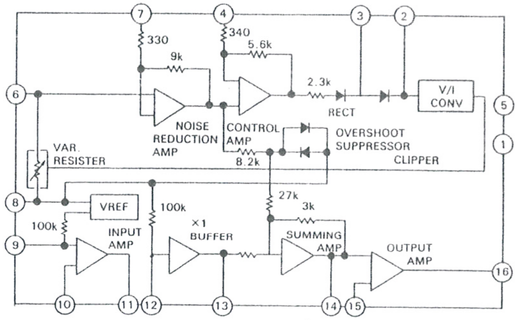

VCC
GND
Data-out Buffer
Memory Cell array 128x128
Sense Amp
Column Decoder
Address Buffer
A3
A2
A1
A0
Data-in Controller
Row Decoder
Data-in Buffer
Address Buffer
A4
A5
A6
A7
A8
A9
A10
I/01 ·········I/08
CE
OE
WE

■ LA 3607S : IC501, IC502 : S.E.A. GRAPHIC EQUALIZER

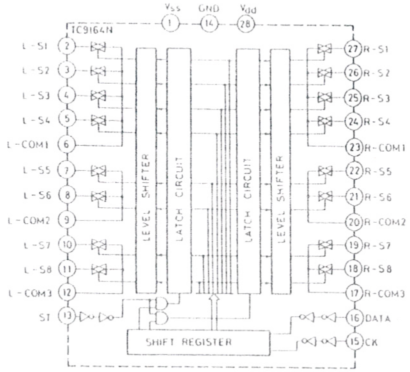

GND
DC
Vcc
OUT
NF
IN
NF7
BASE7
NF6
BASE6
20
19
18
17
16
15
14
13
12
11
LA 3607 S
1
2
3
4
5
6
7
8
9
10
BASE1
NF1
BASE2
NF2
BASE3
NF3
BASE4
NF4
BASE5
NF5

■ LA2730 (IC661): Dolby "B" Noise Reduction

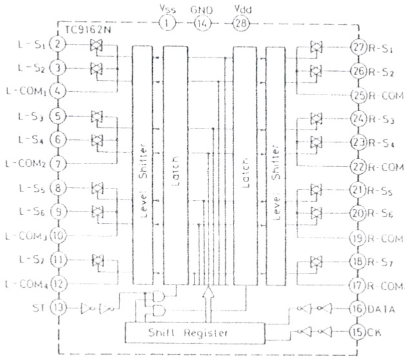

LA2730
GND 1
RECT. FILTER 2
RECT. FILTER 3
CONTROL GAIN 4
V+ 5
NOISE RED IN 6
N, RAMP DECOUPLE 7
VREF 8
16 OUTPUT AMP OUT
15 OUTPUT AMP GAIN
14 SUMMING AMP OUT
13 BUFFER OUT
12 BUFFER IN
11 INPUT AMP OUT
10 INPUT AMP GAIN
9 INPUT AMP IN


7
4
3
2
330
340
9k
5.6k
2.3k
RECT
V/I
CONV
5
6
NOISE
REDUCTION
AMP
CONTROL
AMP
8.2k
OVERSHOOT
SUPPRESSOR
CLIPPER
1
VAR.
RESISTER
8
VREF
100k
27k
3k
9
100k
INPUT
AMP
×1
BUFFER
SUMMING
AMP
OUTPUT
AMP
16
10
11
12
13
14
15

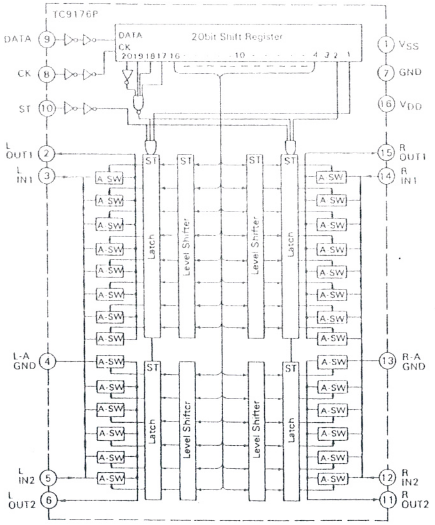
■ TC9164N (IC302)


Vss
GND
Vdd
1
14
28
TC9164N
L-S1 2
L-S2 3
L-S3 4
L-S4 5
L-COM1 6
L-S5 7
L-S6 8
L-COM2 9
L-S7 10
L-S8 11
L-COM3 12
ST 13
27 R-S1
26 R-S2
25 R-S3
24 R-S4
23 R-COM1
22 R-S5
21 R-S6
20 R-COM2
19 R-S7
18 R-S8
17 R-COM3
16 DATA
15 CK
LEVEL SHIFTER
LATCH CIRCUIT
LATCH CIRCUIT
LEVEL SHIFTER
SHIFT REGISTER

■ TC9162N (IC581)

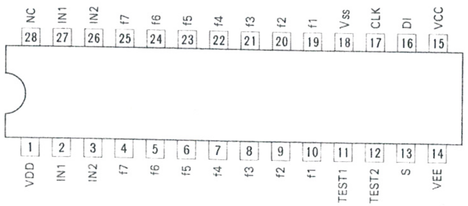

Vss
GND
Vdd
1
14
28
TC9162N
L-S1 2
L-S2 3
L-COM1 4
L-S3 5
L-S4 6
L-COM2 7
L-S5 8
L-S6 9
L-COM3 10
L-S7 11
L-COM4 12
ST 13
27 R-S1
26 R-S2
25 R-COM1
24 R-S3
23 R-S4
22 R-COM2
21 R-S5
20 R-S6
19 R-COM3
18 R-S7
17 R-COM4
16 DATA
15 CK
Level Shifter
Latch
Latch
Level Shifter
Shift Register

■ TC9176P (IC561)

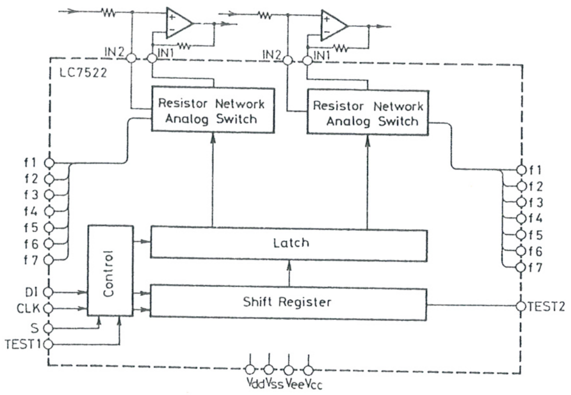

TC9176P
DATA 9
CK 8
ST 10
DATA
CK
20bit Shift Register
20 19 18 17 16
10
4 3 2 1
1 VSS
7 GND
16 VDD
L OUT1 2
L IN1 3
L-A GND 4
L IN2 5
L OUT2 6
15 R OUT1
14 R IN1
13 R-A GND
12 R IN2
11 R OUT2
ST
A-SW
Latch
Level Shifter

■ LC7522 (IC504): Electro Volume

(1) Top View


NC
IN1
IN2
f7
f6
f5
f4
f3
f2
f1
Vss
CLK
DI
VCC
28
27
26
25
24
23
22
21
20
19
18
17
16
15
1
2
3
4
5
6
7
8
9
10
11
12
13
14
VDD
IN1
IN2
f7
f6
f5
f4
f3
f2
f1
TEST1
TEST2
S
VEE

(2) Block Diagram

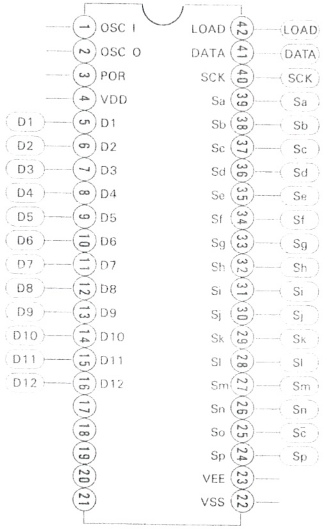

IN2
IN1
IN2
IN1
LC7522
Resistor Network
Analog Switch
Resistor Network
Analog Switch
f1
f2
f3
f4
f5
f6
f7
DI
CLK
S
TEST1
Control
Latch
Shift Register
TEST2
f1
f2
f3
f4
f5
f6
f7
VddVssVeeVcc

(3) Pin Functions

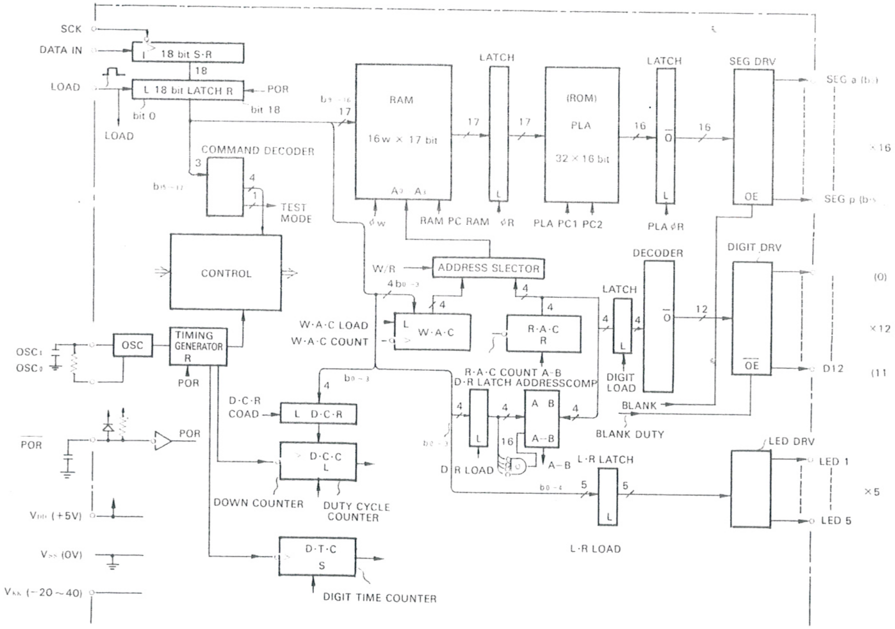
Pin Name	Functions
VDD	Power supply. +7V typ. For audio signal
VSS	Power supply. 0V
VEE	Power supply. −7V typ. For audio signal. Connect to Vss when using single-power
VCC	Power supply. +5V typ.
DI	Data input from the CPU Schmitt inverter type
CLK	Clock signal input from the CPU Schmitt inverter type
IN 1 IN 2	Audio signal input The inversion signal of the OP. amp, Input to IN 1 normally The non-inversion signal of OP. AmP, is input to IN 2 normally
f1~f7	Used to connect a band-pass filter f1~ f7×2 (Left and Right) = 14(sum) pins
S	Used for selecting when using 2 tips Key code 7C3 is connected to VDD when "1"is input Key code 7C2 is connected to VEE when "0" is input
TEST 1 TEST 2	Used for testing the inside of the IC Leave open normally

■ MSC7112-01SS (IC463): Flourescent Display Driver

(1) Top View

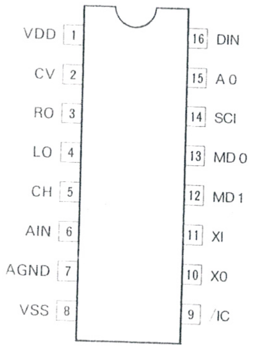

1 OSC I
2 OSC O
3 POR
4 VDD
D1 5 D1
D2 6 D2
D3 7 D3
D4 8 D4
D5 9 D5
D6 10 D6
D7 11 D7
D8 12 D8
D9 13 D9
D10 14 D10
D11 15 D11
D12 16 D12
17
18
19
20
21
LOAD 42 LOAD
DATA 41 DATA
SCK 40 SCK
Sa 39 Sa
Sb 38 Sb
Sc 37 Sc
Sd 36 Sd
Se 35 Se
Sf 34 Sf
Sg 33 Sg
Sh 32 Sh
Si 31 Si
Sj 30 Sj
Sk 29 Sk
Sl 28 Sl
Sm 27 Sm
Sn 26 Sn
So 25 So
Sp 24 Sp
VEE 23
VSS 22

(2) Block Diagram


SCK
DATA IN
LOAD
18 bit S-R
18
L 18 bit LATCH R
POR
bit 18
bit 0
LOAD
COMMAND DECODER
3
4
1
TEST MODE
CONTROL
OSC
TIMING GENERATOR
R
POR
OSC1
OSC2
POR
POR
VDD (+5V)
VSS (0V)
VKK (−20∼40)
RAM
16w × 17 bit
17
LATCH
17
17
(ROM)
PLA
32 × 16 bit
16
LATCH
16
SEG DRV
OE
SEG a
×16
SEG p
RAM PC RAM φR
PLA PC1 PC2
PLA φR
φW
W/R
ADDRESS SLECTOR
4
4
W·A·C LOAD
W·A·C COUNT
W·A·C
R·A·C
R
R·A·C COUNT A·B
D·R LATCH ADDRESSCOMP
A B
A=B
A−B
D·R LOAD
DECODER
LATCH
12
DIGIT LOAD
BLANK
BLANK DUTY
DIGIT DRV
OE
(0)
×12
D12
(11
D·C·R COAD
L D·C·R
D·C·C
L
DOWN COUNTER
DUTY CYCLE COUNTER
D·T·C
S
DIGIT TIME COUNTER
L·R LATCH
5
5
L·R LOAD
LED DRV
LED 1
×5
LED 5

■ YM3428 (IC631): Digital Surround Processor

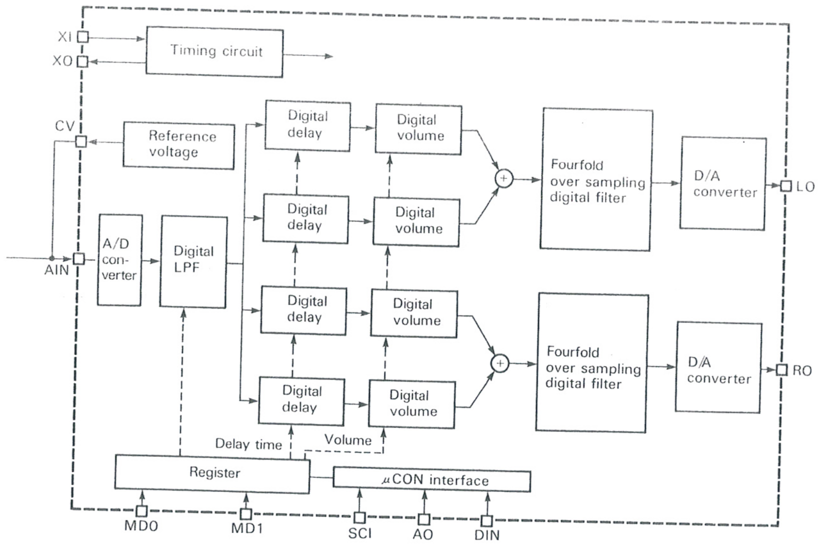
(1) Top View and pin Functions


VDD 1
CV 2
RO 3
LO 4
CH 5
AIN 6
AGND 7
VSS 8
16 DIN
15 A0
14 SCI
13 MD0
12 MD1
11 XI
10 XO
9 /IC

Pin No.	Pin Name	I/O	Pin Functions
1	VDD	–	Power supply (+5V)
2	CV	O	Reference voltage for A/D converter (+2.5V)
3	RO	O	R-ch output(D/A converted analogue signal)
4	LO	O	L-ch output(D/A converted analogue signal)
5	CH	O	Used to connection an external capacitor for S/H
6	AIN	I	Analogue input (CV voltage is the reference)
7	AGND	–	Ground of A/D and D/A connectors (connect to VSS externally)
8	VSS	–	Digital system ground of this LSI
9	/IC	* I	Reset
10 11	XO XI	O I	Used to connect at crystal oscillator (XI is an input-pin for the clock signal when using an external clock)
12	MD1 MD0	* I * I	Mode designating pin
14 15 16	SCI AO DIN	I I I	Data shift clock input when using a μcon. Address/Data identifying signal input when using an μcon. Data input when using a μcon.

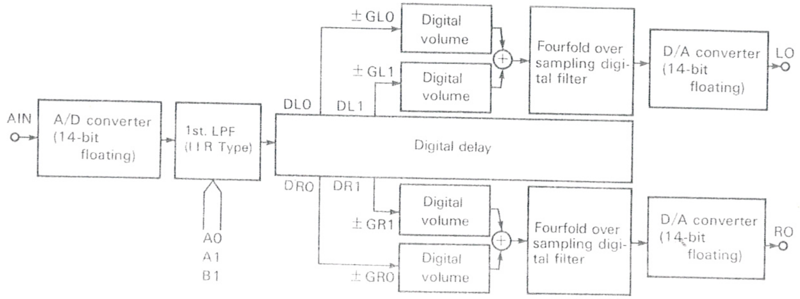
* Asterisked pin have a Built in pull-up register.

(2) Block Diagram

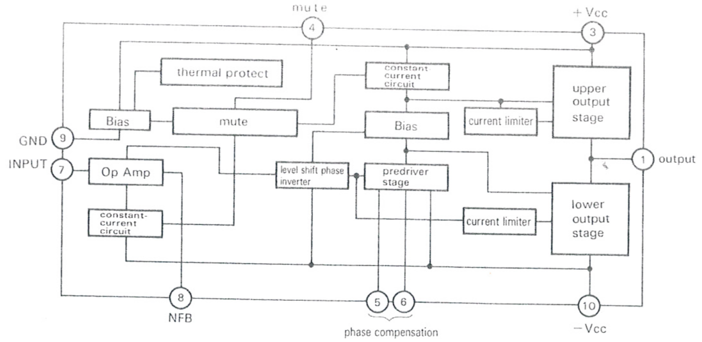

XI
XO
Timing circuit
CV
Reference voltage
AIN
A/D con-verter
Digital LPF
Digital delay
Digital volume
Digital delay
Digital volume
Digital delay
Digital volume
Digital delay
Digital volume
Fourfold over sampling digital filter
D/A converter
LO
Fourfold over sampling digital filter
D/A converter
RO
Delay time
Volume
Register
μCON interface
MD0
MD1
SCI
AO
DIN

(3) Description

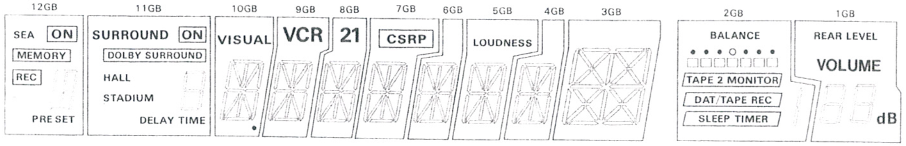
As shown in the figure, the analogue input at AIN is sampled at the rate of 24.85 kHz and converted to the floating 14-bit digital signal through the A/D converter (14-bit floating type) and is input to the 1st. lowpass filter (IIR type) flow it. (This filter controls the cut-off frequency by inputting coefficients to A0, A1 and B1 registers with a conne--cted μ con,)
The digital delay unit employs RAMs and has four output taps. Each tap location is switched by DL0, DL1, DR0 and DR1 registers respectively.
Each of the digital volume units performs the digital attenuation proress on each of the outputs from the taps with the coefficients of the volume register GL0, GL1, GR0 and GR1.
The adders perform the addition of L0 + L1 and R0 + R1 and they are input to the fourfold over sampling digital filters.
These circuits have a blocking band characteristic of −25dB and enable the externally connected lowpass filter to be simplified by attenuating the aliasing noises which appear at D/A conversion.
The sampling rate of the digital input to the D/A converters is 99.4 k Hz, a fourfold frequency of 24.85 kHz.
The principle of this digital processing system is that the programs stored in ROM perform the DSP process inside the LSI.


±GL0
Digital volume
±GL1
Digital volume
Fourfold over sampling digi-tal filter
D/A converter (14-bit floating)
LO
AIN
A/D converter (14-bit floating)
1st. LPF (IIR Type)
DL0
DL1
Digital delay
DR0
DR1
A0
A1
B1
±GR1
Digital volume
±GR0
Digital volume
Fourfold over sampling digi-tal filter
D/A converter (14-bit floating)
RO

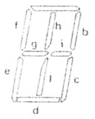
■ μPC 1188H (IC021, IC022): Power Amplifier


mute
4
+Vcc
3
thermal protect
constant current circuit
Bias
mute
Bias
current limiter
upper output stage
GND
9
INPUT
7
Op Amp
level shift phase inverter
predriver stage
1
output
constant-current circuit
current limiter
lower output stage
8
NFB
5
6
phase compensation
10
−Vcc

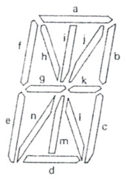
■ Source Section


12GB
11GB
10GB
9GB
8GB
7GB
6GB
5GB
4GB
3GB
2GB
1GB
SEA
ON
MEMORY
REC
PRESET
SURROUND
ON
DOLBY SURROUND
HALL
STADIUM
DELAY TIME
VISUAL
VCR
21
CSRP
LOUDNESS
BALANCE
TAPE 2 MONITOR
DAT/TAPE REC
SLEEP TIMER
REAR LEVEL
VOLUME
dB

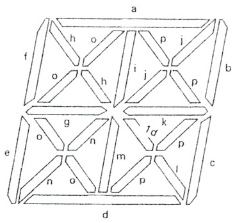
12GB



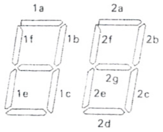
4GB~10GB


a
f
h
i
j
b
g
k
e
n
l
c
m
d

3GB


a
f
h
o
p
j
b
i
j
p
g
k
o
n
l
e
m
c
n
o
p
d

1GB


1a
2a
1f
1b
2f
2b
2g
1e
1c
2e
2c
2d

ANODE CONNECTION

	12GB	11GB	10GB	9GB	8GB	7GB	6GB	5GB	4GB	3GB	2GB	1GB
S1B	a	a	a	a	a	a	a	a	a	a	BALANCE ●●●○●●●	1a
S2B	b	b	b	b	b	b	b	b	b	b	■	1b
S3B	c	c	c	c	c	c	c	c	c	c	TAPE2 MONITOR	1c
S4B	d	d	d	d	d	d	d	d	d	d	SLEEP TIMER	1d
S5B	e	e	e	e	e	e	e	e	e	e	/	1e
S6B	f	f	f	f	f	f	f	f	f	f	■	1f
S7B	g	g	g	g	g	g	g	g	g	g	■	1g
S8B	h	SURROUND	h	h	h	h	h	h	h	h	■	REAR LEVEL
S9B	i	ON	i	i	i	i	i	i	i	i	■	2a
S10B	j	DOLBY SURROUND	j	j	j	j	j	j	j	j	■	2b
S11B	SEA	-	k	k	k	k	k	k	k	k	■	2c
S12B	PRESET	DELAY TIME	l	l	l	l	l	l	l	l	--	2d
S13B	REC	STADIUM	m	m	m	m	m	m	m	m	DAT/TAPE REC	2e
S14B	MEMORY	HALL	n	n	n	n	n	n	n	n	—	2f
S15B	ON	—	VISUAL	VCR	1	CSRP	—	LOUDNESS	—	o	—	2g
S16B	—	—	●	—	2	—	—	—	—	p	—	VOLUME. dB

Removal Procedures

■ Removing the Top cover

1. Remove the six screws fixing the top cover (four screws on the both sides and two on the rear).
2. Dismount the top cover by slightly opening its sides and lifting the rear.

■ Removing the Front Panel

1. Remove the top cover.
2. Remove three screws on the upper part of the front panel and five screws from the lower part.
3. Remove the front panel.

■ Removing the FL Display PCB

1. Remove two plastic rivets Ⓐ & Ⓑ.
2. Remove three plastic rivets Ⓒ securing the FL Display PCB.

■ Removing the power Transistors

1. Remove the top cover.
2. Dismount the bottom cover.
   · Remove 16 screws on bottom cover.
3. Unsolder the power transistors.
4. Remove the screws holding the power transistors using a wrench having a diagonal length of 5.5mm.

■ Removing the joint PCB

●ENC-062-2

1. Pull off the flat wires from the sockets on ENB-085-4.
2. Remove a screw Ⓓ securing the shield bracket and a plastic rivet Ⓔ on ENB-085-4.
3. Remove a securing the bracket on bottom cover.
4. Dismount the shield bracket and ENB-085-4.
5. Remove two plastic rivets.
6. Pull it up from the connectors.

● ENB-085-5, ENH-125-5, ENC-062-1

1. Remove 14 screws Ⓕ on the rear panel.
2. Move the rear panel toward you and then pull up from connectors.

● ENA-068 (Tuner PCB)

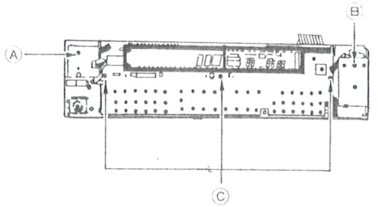
1. Remove 14 screws Ⓕ on the rear panel.
2. Remove a plastic rivet Ⓔ.
3. Pull off a three pins flat wire from the socket.
4. Remove two screws securing the shield bracket on tuner PCB.
5. Pull it up from connectors.

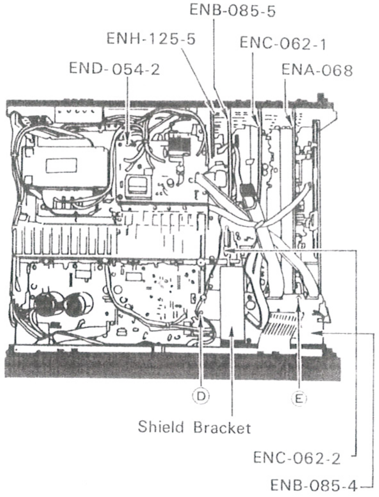
■ Removing the PCB (END-054-2)

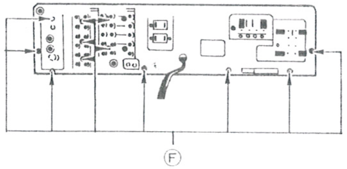
1. Pull off the flat wires from the sockets.
2. Remove 4 screws securing the PCB.

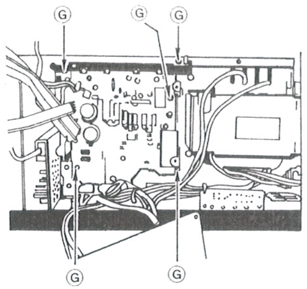
■ Removing the surround amp. PCB (END-054-1)

1. Remove the END-054-2
2. Remove 5 screws Ⓖ securing the PCB and heat sink bracket.




ENB-085-5
ENH-125-5
ENC-062-1
END-054-2
ENA-068
Ⓓ
Ⓔ
Shield Bracket
ENC-062-2
ENB-085-4



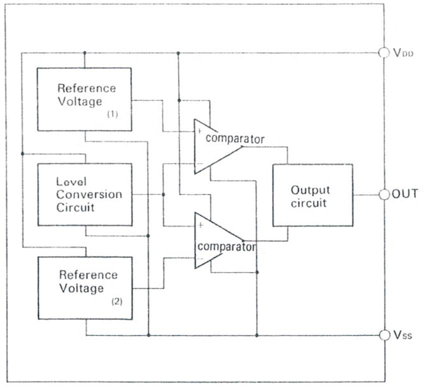


(3) Pin Functions

Pin Name	I/O	Connection	Functions
VDD VSS VEE		Power source	VDD-VSS Power supply for the internal logic VDD-VEE: Power supply for the FL drive circuit
DATA IN	I	μCon	Display data to the shift register
SCLK	I	μCon	Shift clock signal to the shift register Data shift as SCLK rises
LOAD	I	μCon	Latch clock signal for the display data The data at the Latch go through at "H" level and the data just before the "H" signal are latched at "L" level.
POR	With a built-in Schmitt circuit pull-up resistor and diode		Reset signal input to the internal logic when turning on. At resetting the 18-bit latch, duty cycle register, digit register, LED register and write/read address counter inside the IC are all reset and SEGa~SEGp, D1~D12 and LED1~LED5 are all turned off. Auto-power-on reset is available if an external capacitor is connected to this pin.
OSC I OSC O	I O		Input to the oscillator circuit. Oscillator circuit is made up by connecting an external capacitor and resistor.
SEGa~p	O	anode side of FL display tube	FL display tube drive signal
D1~12	O	Grid side of FL display tube	FL display tube drive signal.
LED 1~ LED 5	O	LED	LED drive signal

MN1280 (P.Q).: IC471 RESET IC

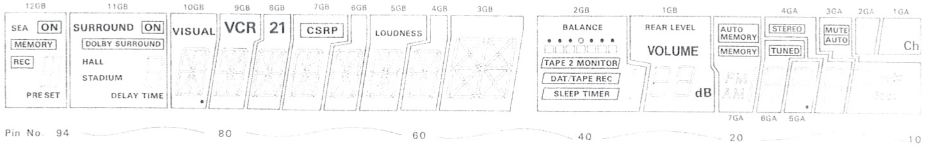
Block Diagram


VDD
Reference Voltage (1)
comparator
Level Conversion Circuit
Output circuit
OUT
comparator
Reference Voltage (2)
VSS

PIN No.	PIN NAME	PIN FUNCTIONS
2	VDD	Power supply
3	Vss	Ground
1	OUT	Reset signal output: Low level is output when resetting : High level is output when cancelling the reset.

Internal Wiring of Fluorescent Display (IC421:ELU0001-070)

Terminal Layout

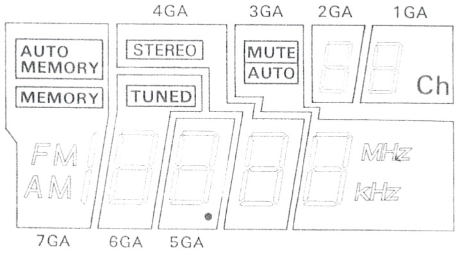

12GB
11GB
10GB
9GB
8GB
7GB
6GB
5GB
4GB
3GB
2GB
1GB
4GA
3GA
2GA
1GA
SEA
ON
MEMORY
REC
PRE SET
SURROUND
ON
DOLBY SURROUND
HALL
STADIUM
DELAY TIME
VISUAL
VCR
21
CSRP
LOUDNESS
BALANCE
TAPE 2 MONITOR
DAT/TAPE REC
SLEEP TIMER
REAR LEVEL
VOLUME
dB
AUTO MEMORY
MEMORY
STEREO
TUNED
MUTE
AUTO
Ch
7GA
6GA
5GA
Pin No. 94
80
60
40
20
10

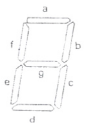
PIN CONNECTION

PIN NO.	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51
CONNECTION	F2	F2	NP	NP	12GB	11GB	10GB	9GB	8GB	7GB	NP	S1B	S2B	S8B	S9B	S10B	S11B	S3B	S4B	S5B	S6B	S7B	S12B	S13B	S14B	S15B	S16B	6GB	5GB	4GB	3GB	2GB	1GB	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP

50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
NP	NP	NP	NP	NP	NP	NP	Fd	Fd	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	7GA	6GA	5GA	4GA	3GA	2GA	1GA	S8A	S7A	S6A	S5A	S4A	S3A	S2A	S1A	NP	NP	F1	F1

Tuner Section


4GA
3GA
2GA
1GA
AUTO MEMORY
MEMORY
STEREO
TUNED
MUTE
AUTO
Ch
FM
AM
MHz
kHz
7GA
6GA
5GA



ANODE CONNECTION

	7GA	6GA	5GA	4GA	3GA	2GA	1GA
S1A	−	TUNED	•	STEREO	MUTE AUTO	−	ch
S2A	AUTO MEMORY	a	a	a	−	a	a
S3A	−	b	b	b	MHz	b	b
S4A	MEMORY	c	c	c	kHz	c	c
S5A	−	d	d	d		d	d
S6A	FM	e	e	e		e	e
S7A	AM	f	f	f		f	f
S8A	/ /	g	g	g		g	g

PARTS LIST

Contents

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Printed Circuit Board Ass'y and Parts List ······························· 2-7

- ■ ENH-125 ☐ Power Amplifier PC Board Ass'y ······························· 2-7
- ■ ENB-085 ☐ Front Control PC Board Ass'y ······························· 2-11
- ■ ENF-052 ☐ Switch & SEA Volume PC Board Ass'y ······························· 2-14
- ■ END-054 ☐ Rear Amplifier PC Board Ass'y ······························· 2-17
- ■ ENC-062 ☐ Digital Surround PC Board Ass'y ······························· 2-20
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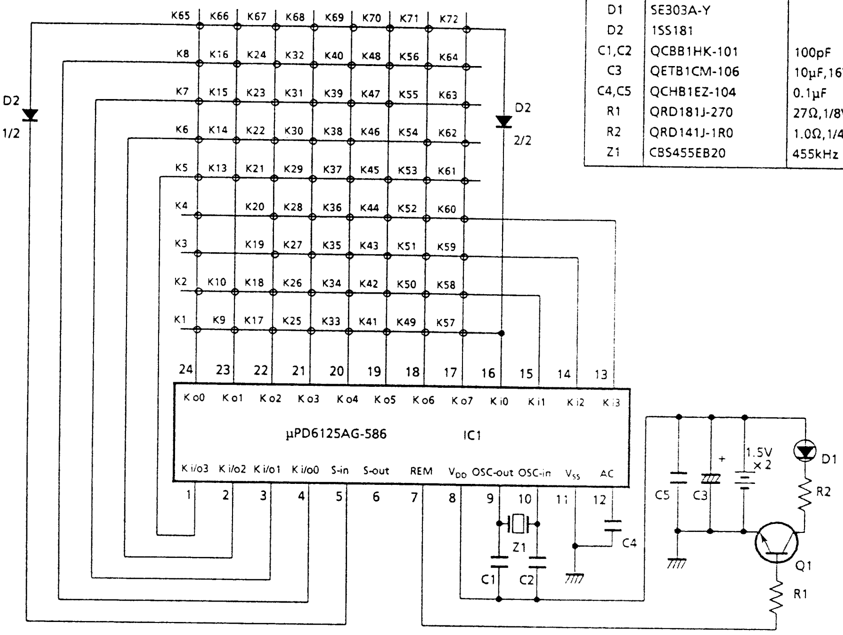
Accessories List ······························· 2-27

Packing Materials and Part Numbers ······························· 2-28

Remote Control Unit (RM-SR701U)

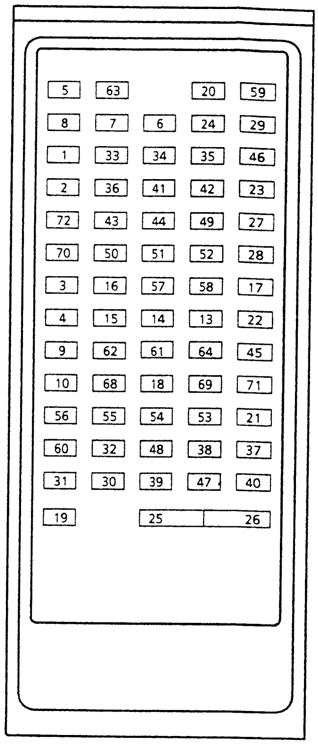
■ Schematic Diagram


K65 K66 K67 K68 K69 K70 K71 K72
K8 K16 K24 K32 K40 K48 K56 K64
K7 K15 K23 K31 K39 K47 K55 K63
K6 K14 K22 K30 K38 K46 K54 K62
K5 K13 K21 K29 K37 K45 K53 K61
K4 K20 K28 K36 K44 K52 K60
K3 K19 K27 K35 K43 K51 K59
K2 K10 K18 K26 K34 K42 K50 K58
K1 K9 K17 K25 K33 K41 K49 K57
D2 1/2
D2 2/2
μPD6125AG-586
IC1
Ko0 Ko1 Ko2 Ko3 Ko4 Ko5 Ko6 Ko7 Ki0 Ki1 Ki2 Ki3
Ki/o3 Ki/o2 Ki/o1 Ki/o0 S-in S-out REM V_DD OSC-out OSC-in V_SS AC
24 23 22 21 20 19 18 17 16 15 14 13
1 2 3 4 5 6 7 8 9 10 11 12
Z1
C1
C2
C4
C5
C3
1.5V x2
D1
R2
Q1
R1

■ Parts List

Symbol	Part Number	Description
IC1	μPD6125AG-586	
Q1	2SC3265(O,Y)	
D1	SE303A-Y	
D2	1SS181	
C1,C2	QCBB1HK-101	100pF
C3	QETB1CM-106	10μF,16V
C4,C5	QCHB1EZ-104	0.1μF
R1	QRD181J-270	27Ω,1/8W
R2	QRD141J-1R0	1.0Ω,1/4W
Z1	CBS455EB20	455kHz

■ Key Layout


5 63 20 59
8 7 6 24 29
1 33 34 35 46
2 36 41 42 23
72 43 44 49 27
70 50 51 52 28
3 16 57 58 17
4 15 14 13 22
9 62 61 64 45
10 68 18 69 71
56 55 54 53 21
60 32 48 38 37
31 30 39 47 40
19 25 26

MEMO

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
	1	EFP-RX701VBKE	Front Panel Ass'y	1		Except LE , LBS
		EFPRX701VLBKE	Front Panel Ass'y	1		LE , LBS
	1-1	E26248-001	Front Panel	1		
	1-2	E11890-001	Front Base	1		
	1-3	E26250-001	Door	1		
	1-4	E26252-001	SW. Plate	1		Except LE , LBS
		E26252-002	SW. Plate	1		LE , LBS
	1-5	E26254-001	Preset Button	1	Left	
	1-6	E26254-002	Preset Button	1	Right	
	1-7	E26255-001	Source Button	1		
	1-8	E26256-003	Window Screen	1		Except LE , LBS
		E26256-004	Window Screen	1		LE , LBS
	1-9	E305513-001	Magnet	2		
	1-10	E305654-002	Damper Ass'y	1		
	1-11	E305741-001	Power Button	1		
	1-12	E305742-001	Volume Button	1		
	1-13	E305786-001	Hinge	1	Left	
	1-14	E305786-002	Hinge	1	Right	
	1-15	E305789-001	FL. Screen	1		
	1-16	E60912-003	Speed Nut	1		
	1-17	E72436-006	Screen	1		
	1-18	E72437-006	Sheet	1		
	1-19	E75089-001	Earth Plate	1		
	1-20	E75090-002	Hinge Plate	2		
	1-21	E75279-003	Sheet	2		
	1-22	EXO007004H02S	Spacer	2		
	1-23	SBSF3008Z	Screw	1	for Damper	
	1-24	E72968-001	JVC Mark	1		
	2	SBSG3008M	Screw	23		Except U , P , PG , G
		SBSG3008M	Screw	24		G
		SBSG3008M	Screw	25		U , P , PG
	3	SSSG3008M	Screw	1		
	4	E75073-001	Push Button	1	Left	
	5	E75073-002	Push Button	1	Right	
	6	E75143-001	Head Phone Bracket	1		
	7	SBSG3008CC	Screw	56		
	8	SBST3006CC	Screw	2		
	9	E48729-008	Plastic Rivet	11		
	10	E48729-007	Plastic Rivet	2		
	11	E11891-002	Front Bracket	1		
	12	E25936-004	Metal Cover	1		Except E , LE , LBS
		E25937-002	Metal Cover	1		E , LE , LBS
	13	E23862-005	Grill	1		E , LE , LBS
	14	E61660-004	Special Screw	4		
	15	EWR1IE-13TT	F.Flat Wire	1	FW441	
	16	E305791-002	Shield Bracket	1		
	17	E302535-001	Side Bracket	1	Right	
	18	E305788-001	Center Bracket	1		
	19	E305234-001	Side Bracket	1	Left	
	20	E11663-002	Bottom Plate	1		
	21	E75088-001	Foot Ass'y	4		
	22	GBST3008CC	Screw	4	for Foot	
	23	E70115-002	Caution Label	1		E , A , G , LE , LBS
		E70281-001	Caution Label	1		J
	24	E26264-001	Trans Bracket	1		
	25	E75092-001	Sub Heat Sink Bracket	2		
⚠	26	ETP1200-33EA	Power Transformer	1		E , A , LE
⚠		ETP1200-33EABS	Power Transformer	1		LBS
⚠		ETP1200-33FA	Power Transformer	1		U , P , PG
⚠		ETP1200-33JA	Power Transformer	1		J , C

⚠: Safety Parts

⚠	Item	Part Number	Part Name	Q'ty	Description	Areas
⚠		ETP1200-33XA	Power Transformer	1		G
	27	E65389-004	Special Screw	4		
	28	E306040-001	Circuit Board Holder	1		
	29	E306041-001	Circuit Board Holder	1		
⚠	30	QMF51U1-5R0S	Fuse	1	F001	J , C
⚠		QMF51E2-2R5J1	Fuse	1	F001	A , E , G , LE
⚠		QMF51E2-2R5J1BS	Fuse	1	F001	LBS
⚠	31	QMF51E2-R10J1	Fuse	1	F002	A , E , G , LE
⚠		QMF51E2-R10J1BS	Fuse	1	F002	LBS
⚠	32	QMF51U1-3R15S	Fuse	2	F851,F852	J , C
⚠		QMF51E2-3R15J1	Fuse	2	F851,F852	A , E , G , U , LE
⚠		QMF51E2-3R1J1BS	Fuse	2	F851,F852	LBS
	33	E302321-001	Fastner	2		Except , J , C ,U , P , PG
	34	E305787-002	Primary Cover	1		Except , J , C ,U , P , PG
	35	E73937-001	P.Sheet	1		
	36	E50670-003	Wire Clamp	1		
	37	E75091-002	Circuit Board Bracket	1		
	38	E304771-001	Earth Plate	1		
	39	E69589-008	Spacer	1		J
	40	E69291-001	Fuse Cover	1		U , P , PG , LE
⚠	41	QSR0085-008U	Voltage Selector	1		U , P , PG
	42	E302764-001	Voltage Selector Cover	1		U , P , PG
	43	E25938-021	Rear Panel	1		J , C
		E25938-022	Rear Panel	1		U , P , PG
		E25938-023	Rear Panel	1		A , E , LBS
		E25938-024	Rear Panel	1		G
		E25938-025	Rear Panel	1		LE
	[illegible]	E306019-001	Rating Label	1		E
	[illegible]	E306019-002	Rating Label	1	Made in Malaysia	E
	[illegible]	E306019-003	Rating Label	[illegible]		A
	[illegible]	E306019-034	Rating Label	1	Made in Singapore	A
	[illegible]	E306019-046	Rating Label	1	Made in Singapore	U
	44	EXO085010R10S	Spacer	2		
	45	E70078-001	GND. Treminal	1		
	46	SDSG3008M	Screw	6		J , C , U , P , PG
		SDSG3008M	Screw	4		E , G , A , LE , LBS
	47	QMG0301-003	Fuse Holder	1		U , LE
⚠	48	QMF51E2-2R5J1	Fuse	1	F001	U , PG
⚠		QMF51E2-5R0J1	Fuse	1	F001	P
⚠		QMF51E2-1R25J1	Fuse	1	F003	LE
⚠	49	EMC0236-001	AC Outlet	1		E , G , LE
⚠		EMC0233-001	AC Outlet	1		A
⚠		EMC0237-001BS	AC Outlet	1		LBS
⚠	50	QHS3876-162	Cord Stopper	1		Except LBS
⚠		QHS3876-162BS	Cord Stopper	1		LBS
⚠	51	QMP1480-200	Power Cord	1		J , C
⚠		QMP2560-244	Power Cord	1		A
⚠		QMP39A0-200	Power Cord	1		G
⚠		QMP3900-200	Power Cord	1		E , LE
⚠		QMP7600-200	Power Cord	1		U , P , PG
⚠		QMP9017-008BS	Power Cord	1		LBS
	52	E49267-001	Oligin Marking Label	1		LBS
	53	EXO050020N90S02	Spacer	1		

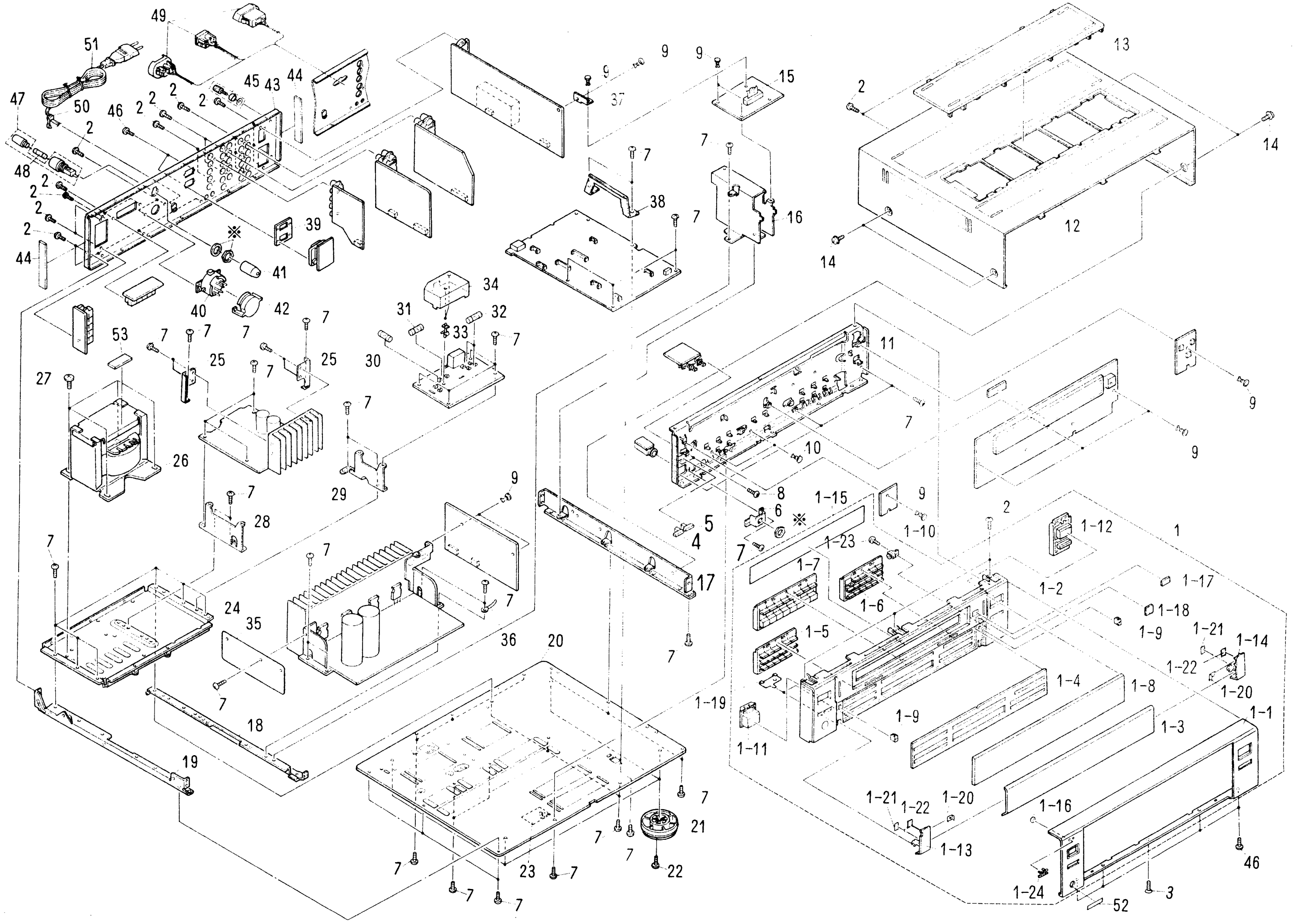
⚠: Safety Parts

The Marks for Designated Areas.

J··························the U.S.A
C··························Canada
U··························Other Countries
P,PG·······················U.S.Military Market
E··························Europe

G··························West Germany
A··························Australia
LE·························Europe (with LW)
LBS························the U.K (with LW)
No mark indicates all areas.

Exploded View and Parts List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※ : An accessory for a Parts.

Note (1)

PC Board Ass'y	Designated Areas
ENH-125 A	the U. S. A.
ENH-125 B	Canada
ENH-125 C	Other Countries
ENH-125 D	Europe, Australia, Europe(with LW)
ENH-125 E	the U. K. (with LW)
ENH-125 F	West Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q341	2SC1685(R,S)	SILICON	MATSUSHITA	
	Q342	2SC458(C,D)	SILICON	HITACHI	
	Q343	2SC1685(R,S)	SILICON	MATSUSHITA	
	Q344	2SC458(C,D)	SILICON	HITACHI	
	Q345	2SC458(C,D)	SILICON	HITACHI	
	Q346	2SC1685(R,S)	SILICON	MATSUSHITA	
	Q347	2SC1685(R,S)	SILICON	MATSUSHITA	
	Q348	DTC144ES	SILICON	ROHM	
	Q349	DTA114YS	SILICON	ROHM	
	Q350	DTC144ES	SILICON	ROHM	
	Q351	2SA933LN(R,S)	SILICON	ROHM	
	Q352	2SA933LN(R,S)	SILICON	ROHM	
	Q701	2SC2240(A,B)	SILICON	TOSHIBA	
	Q702	2SC2240(A,B)	SILICON	TOSHIBA	
	Q703	2SC2240(A,B)	SILICON	TOSHIBA	
	Q704	2SC2240(A,B)	SILICON	TOSHIBA	
	Q705	2SA1038(S,E)	SILICON	ROHM	
	Q706	2SA1038(S,E)	SILICON	ROHM	
	Q707	2SA933LN(R,S)	SILICON	ROHM	
	Q708	2SA933LN(R,S)	SILICON	ROHM	
	Q709	2SA1038(S,E)	SILICON	ROHM	
	Q710	2SA1038(S,E)	SILICON	ROHM	
	Q711	2SC2389(S,E)	SILICON	ROHM	
	Q712	2SC2389(S,E)	SILICON	ROHM	
	Q713	2SC1740S(R,S)	SILICON	ROHM	
	Q714	2SC1740S(R,S)	SILICON	ROHM	
	Q715	2SA933LN(R,S)	SILICON	ROHM	
	Q716	2SA933LN(R,S)	SILICON	ROHM	
	Q717	2SC2389(S,E)	SILICON	ROHM	
	Q718	2SC2389(S,E)	SILICON	ROHM	
	Q719	2SA1038(S,E)	SILICON	ROHM	
	Q720	2SA1038(S,E)	SILICON	ROHM	
	Q721	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q722	2SD636(Q,R)	SILICON	MATSUSHITA	
	Q723	2SC2389(E)	SILICON		
	Q724	2SC2389(E)	SILICON		
	Q725	2SA1038(E)	SILICON		
	Q726	2SA1038(E)	SILICON		
	Q727	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q728	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q729	2SA965(O,Y)	SILICON	TOSHIBA	
	Q730	2SA965(O,Y)	SILICON	TOSHIBA	
	Q731	2SD2155LB(R,O)	SILICON	TOSHIBA	
	Q732	2SD2155LB(R,O)	SILICON	TOSHIBA	
	Q733	2SB1429LB(R,O)	SILICON	TOSHIBA	
	Q734	2SB1429LB(R,O)	SILICON	TOSHIBA	
	Q811	2SB941A(P,Q)	SILICON	MATSUSHITA	
	Q901	2SC2389(S,E)	SILICON	ROHM	
	Q902	2SC2389(S,E)	SILICON	ROHM	
	Q903	2SA1038(S,E)	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC341	LC4966	I.C.	SANYO	
	IC701	VC5022-2	I.C.	SANYO	
	IC702	VC5022-2	I.C.	SANYO	
	IC901	TA7317P	I.C.	TOSHIBA	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D341	MTZ9.1JC	ZENER	ROHM	
	D701	1SS133	SILICON	ROHM	
	D702	1SS133	SILICON	ROHM	
	D703	1SS133	SILICON	ROHM	
	D704	1SS133	SILICON	ROHM	
	D705	MTZ18JC	ZENER	ROHM	
	D707	1SS133	SILICON	ROHM	
	D708	1SS133	SILICON	ROHM	
	D801	30DF2SFC	SILICON	NIHONINTER	D
	D801	30DF2SFC	SILICON	NIHONINTER	E
	D801	30DF2SFC	SILICON	NIHONINTER	F
	D801	30DL2FC	SILICON	NIHONINTER	A
	D801	30DL2FC	SILICON	NIHONINTER	B
	D801	30DL2FC	SILICON	NIHONINTER	C
	D802	30DF2SFC	SILICON	NIHONINTER	D
	D802	30DF2SFC	SILICON	NIHONINTER	E
	D802	30DF2SFC	SILICON	NIHONINTER	F
	D802	30DL2FC	SILICON	NIHONINTER	A
	D802	30DL2FC	SILICON	NIHONINTER	B
	D802	30DL2FC	SILICON	NIHONINTER	C
	D803	30DF2SFC	SILICON	NIHONINTER	D
	D803	30DF2SFC	SILICON	NIHONINTER	E
	D803	30DF2SFC	SILICON	NIHONINTER	F
	D803	30DL2FC	SILICON	NIHONINTER	A
	D803	30DL2FC	SILICON	NIHONINTER	B
	D803	30DL2FC	SILICON	NIHONINTER	C
	D804	30DF2SFC	SILICON	NIHONINTER	D
	D804	30DF2SFC	SILICON	NIHONINTER	E
	D804	30DF2SFC	SILICON	NIHONINTER	F
	D804	30DL2FC	SILICON	NIHONINTER	A
	D804	30DL2FC	SILICON	NIHONINTER	B
	D804	30DL2FC	SILICON	NIHONINTER	C
	D811	MTZ18JC	ZENER	ROHM	
	D812	MTZ20JC	ZENER	ROHM	
	D813	1SS133	SILICON	ROHM	
	D815	MTZ8.2JC	ZENER	ROHM	
	D816	MTZ7.5JC	ZENER	ROHM	
	D817	MTZ7.5JC	ZENER	ROHM	
	D818	1SS133	SILICON	ROHM	
	D901	1SS133	SILICON	ROHM	
	D902	1SS133	SILICON	ROHM	
	D903	1SS133	SILICON	ROHM	
	D904	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C341	QETB0JM-108	1000MF	6.3V	ELECTRO	
	C342	QETB0JM-108	1000MF	6.3V	ELECTRO	
	C343	QETB0JM-108	1000MF	6.3V	ELECTRO	
	C344	QCZ0202-155	1.5MF	25V	CERAMIC	
	C345	QFN81HK-104	0.1MF	50V	MYLAR	
	C346	QCF21HP-223	0.022MF	50V	CERAMIC	
	C347	QETB1CM-476	47MF	16V	ELECTRO	
	C349	QCF21HP-223	0.022MF	50V	CERAMIC	
	C350	QETB1CM-476	47MF	16V	ELECTRO	
	C351	QETB1CM-476	47MF	16V	ELECTRO	
	C352	QETB1CM-476	47MF	16V	ELECTRO	
	C353	QETB1CM-477	470MF	16V	ELECTRO	
	C354	QETB1CM-477	470MF	16V	ELECTRO	
	C355	QCS21HJ-471	470PF	50V	CERAMIC	
	C701	EEZ5003-106	10MF		ELECTRO	
	C702	EEZ5003-106	10MF		ELECTRO	
	C703	QCS21HJ-271	270PF	50V	CERAMIC	
	C704	QCS21HJ-271	270PF	50V	CERAMIC	
	C705	QCS21HJ-101	100PF	50V	CERAMIC	
	C706	QCS21HJ-101	100PF	50V	CERAMIC	
	C707	QETB1CM-476	47MF	16V	ELECTRO	
	C708	QETB1CM-476	47MF	16V	ELECTRO	
	C709	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C710	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C711	QCY21HK-152	1500PF	50V	CERAMIC	
	C712	QCY21HK-152	1500PF	50V	CERAMIC	
	C713	QCS21HJ-680	68PF	50V	CERAMIC	
	C714	QCS21HJ-680	68PF	50V	CERAMIC	
	C715	QCS21HJ-680	68PF	50V	CERAMIC	
	C716	QCS21HJ-680	68PF	50V	CERAMIC	
	C717	QCS21HJ-220	22PF	50V	CERAMIC	
	C718	QCS21HJ-220	22PF	50V	CERAMIC	
	C719	QFN81HK-472	4700PF	50V	MYLAR	
	C720	QFN81HK-472	4700PF	50V	MYLAR	
	C722	QETB1EM-106	10MF	25V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C723	QETB2AM-476	47MF	100V	ELECTRO	
	C724	QETB2AM-476	47MF	100V	ELECTRO	
	C725	QCS32HJ-470	47PF	500V	CERAMIC	
	C726	QCS32HJ-470	47PF	500V	CERAMIC	
	C727	QCS32HJ-470	47PF	500V	CERAMIC	
	C728	QCS32HJ-470	47PF	500V	CERAMIC	
	C729	QFN81HK-223	0.022MF	50V	MYLAR	A
	C729	QFN81HK-223	0.022MF	50V	MYLAR	C
	C729	QFN81HK-473	0.047MF	50V	MYLAR	B
	C729	QFN81HK-473	0.047MF	50V	MYLAR	D
	C729	QFN81HK-473	0.047MF	50V	MYLAR	E
	C729	QFN81HK-473	0.047MF	50V	MYLAR	F
	C730	QFN81HK-223	0.022MF	50V	MYLAR	A
	C730	QFN81HK-223	0.022MF	50V	MYLAR	C
	C730	QFN81HK-473	0.047MF	50V	MYLAR	B
	C730	QFN81HK-473	0.047MF	50V	MYLAR	D
	C730	QFN81HK-473	0.047MF	50V	MYLAR	E
	C730	QFN81HK-473	0.047MF	50V	MYLAR	F
	C731	QFN81HK-473	0.047MF	50V	MYLAR	B
	C731	QFN81HK-473	0.047MF	50V	MYLAR	D
	C731	QFN81HK-473	0.047MF	50V	MYLAR	E
	C731	QFN81HK-473	0.047MF	50V	MYLAR	F
	C732	QFN81HK-473	0.047MF	50V	MYLAR	B
	C732	QFN81HK-473	0.047MF	50V	MYLAR	D
	C732	QFN81HK-473	0.047MF	50V	MYLAR	E
	C732	QFN81HK-473	0.047MF	50V	MYLAR	F
	C801	EEW6308-878E	8700MF		ELECTRO	
	C802	EEW6308-878E	8700MF		ELECTRO	
	C804	QCE22HP-103	0.01MF	500V	CERAMIC	
	C805	QCE22HP-103	0.01MF	500V	CERAMIC	
	C806	QCE22HP-103	0.01MF	500V	CERAMIC	A
	C806	QCE22HP-103	0.01MF	500V	CERAMIC	B
	C806	QCE22HP-103	0.01MF	500V	CERAMIC	C
	C811	QCF21HP-472	4700PF	50V	CERAMIC	
	C812	QETB1AM-476	47MF	10V	ELECTRO	
	C813	QETB1HM-476	47MF	50V	ELECTRO	
	C901	QCF21HP-223	0.022MF	50V	CERAMIC	
	C902	QCF21HP-223	0.022MF	50V	CERAMIC	
	C903	QETB1EM-226	22MF	25V	ELECTRO	
	C904	QCF21HP-103	0.01MF	50V	CERAMIC	
	C905	QCY21HK-102	1000PF	50V	CERAMIC	
	C906	QETB1AM-476	47MF	10V	ELECTRO	
	C909	QETB1CM-226	22MF	16V	ELECTRO	
	C911	QETB1HM-225	2.2MF	50V	ELECTRO	
	C941	QFN81HK-103	0.01MF	50V	MYLAR	F
	C942	QFN81HK-103	0.01MF	50V	MYLAR	F
	C943	QFN81HK-103	0.01MF	50V	MYLAR	F
	C944	QFN81HK-103	0.01MF	50V	MYLAR	F
	C945	QCY21HK-102	1000PF	50V	CERAMIC	F
	C946	QCY21HK-102	1000PF	50V	CERAMIC	F
	C947	QCY21HK-102	1000PF	50V	CERAMIC	F
	C948	QCY21HK-102	1000PF	50V	CERAMIC	F
	C949	QCS21HJ-561	560PF	50V	CERAMIC	F
	C950	QCS21HJ-561	560PF	50V	CERAMIC	F
	C951	QCS21HJ-561	560PF	50V	CERAMIC	F
	C952	QCS21HJ-561	560PF	50V	CERAMIC	F
	C971	QCS21HJ-331	330PF	50V	CERAMIC	F
	C972	QCS21HJ-331	330PF	50V	CERAMIC	F
	C973	QCF21HP-103	0.01MF	50V	CERAMIC	F
	C975	QCS21HJ-331	330PF	50V	CERAMIC	F
	C976	QCS21HJ-331	330PF	50V	CERAMIC	F

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R339	QRD167J-681	680	1/6W	CARBON	
	R340	QRD167J-681	680	1/6W	CARBON	
	R341	QRD167J-750	75	1/6W	CARBON	
	R342	QRD167J-750	75	1/6W	CARBON	
	R343	QRD167J-750	75	1/6W	CARBON	
	R344	QRD167J-750	75	1/6W	CARBON	
	R345	QRD167J-750	75	1/6W	CARBON	
	R346	QRD167J-104	100K	1/6W	CARBON	
	R347	QRD167J-560	56	1/6W	CARBON	
	R348	QRD167J-102	1K	1/6W	CARBON	
	R349	QRD167J-560	56	1/6W	CARBON	
	R350	QRD167J-102	1K	1/6W	CARBON	
	R351	QRD167J-272	2.7K	1/6W	CARBON	
	R352	QRD167J-182	1.8K	1/6W	CARBON	
	R353	QRD167J-222	2.2K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

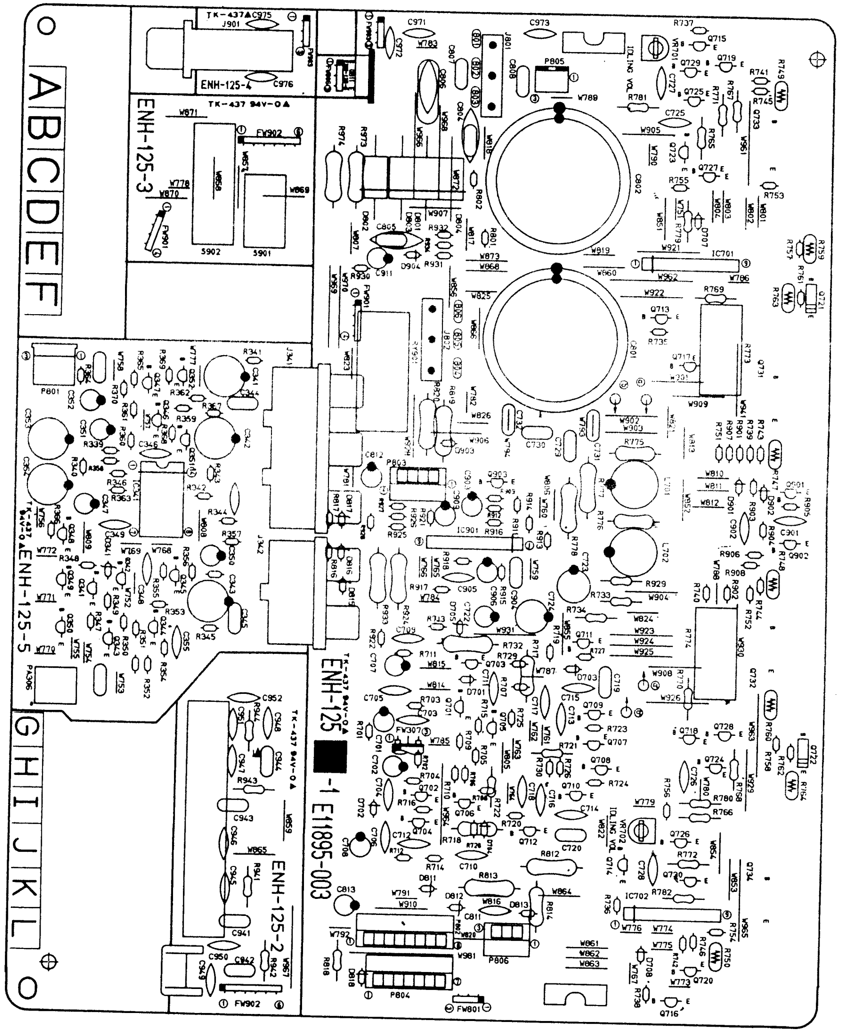
⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R354	QRD167J-101	100	1/6W	CARBON	
	R355	QRD167J-333	33K	1/6W	CARBON	
	R356	QRD167J-123	12K	1/6W	CARBON	
	R357	QRD167J-103	10K	1/6W	CARBON	
	R358	QRD167J-104	100K	1/6W	CARBON	
	R359	QRD167J-271	270	1/6W	CARBON	
	R360	QRD167J-562	5.6K	1/6W	CARBON	
	R361	QRD167J-392	3.9K	1/6W	CARBON	
	R362	QRD167J-271	270	1/6W	CARBON	
	R363	QRD167J-104	100K	1/6W	CARBON	
	R364	QRD167J-562	5.6K	1/6W	CARBON	
	R365	QRD167J-392	3.9K	1/6W	CARBON	
	R366	QRD167J-103	10K	1/6W	CARBON	
	R367	QRD167J-101	100	1/6W	CARBON	
	R368	QRD167J-151	150	1/6W	CARBON	
	R369	QRD167J-101	100	1/6W	CARBON	
	R370	QRD167J-151	150	1/6W	CARBON	
	R701	QRD167J-222	2.2K	1/6W	CARBON	
	R702	QRD167J-222	2.2K	1/6W	CARBON	
	R703	QRD167J-104	100K	1/6W	CARBON	
	R704	QRD167J-104	100K	1/6W	CARBON	
	R705	QRD167J-202	2K	1/6W	CARBON	
	R706	QRD167J-202	2K	1/6W	CARBON	
	R707	QRD167J-202	2K	1/6W	CARBON	
	R708	QRD167J-202	2K	1/6W	CARBON	
	R709	QRD167J-822	8.2K	1/6W	CARBON	
	R710	QRD167J-822	8.2K	1/6W	CARBON	
	R711	QRD167J-152	1.5K	1/6W	CARBON	
	R712	QRD167J-152	1.5K	1/6W	CARBON	
	R713	QRD167J-104	100K	1/6W	CARBON	
	R714	QRD167J-104	100K	1/6W	CARBON	
	R715	QRD167J-101	100	1/6W	CARBON	
	R716	QRD167J-101	100	1/6W	CARBON	
⚠	R717	QRD125J-153	15K	1/2W	UNF.CARBON	
⚠	R718	QRD125J-153	15K	1/2W	UNF.CARBON	
	R719	QRD167J-391	390	1/6W	CARBON	
	R720	QRD167J-391	390	1/6W	CARBON	
⚠	R721	QRD145J-151S	150	1/4W	UNF.CARBON	
⚠	R722	QRD145J-151S	150	1/4W	UNF.CARBON	
	R723	QRD167J-152	1.5K	1/6W	CARBON	
	R724	QRD167J-152	1.5K	1/6W	CARBON	
	R725	QRD167J-333	33K	1/6W	CARBON	
	R726	QRD167J-333	33K	1/6W	CARBON	
	R727	QRD167J-391	390	1/6W	CARBON	
	R728	QRD167J-391	390	1/6W	CARBON	
	R729	QRD167J-152	1.5K	1/6W	CARBON	
	R730	QRD167J-152	1.5K	1/6W	CARBON	
⚠	R732	QRG022J-562A	5.6K	2W	O.M.FILM	
⚠	R733	QRD145J-330S	33	1/4W	UNF.CARBON	
⚠	R734	QRD145J-330S	33	1/4W	UNF.CARBON	
	R735	QRD167J-103	10K	1/6W	CARBON	
	R736	QRD167J-103	10K	1/6W	CARBON	
	R737	QRD167J-103	10K	1/6W	CARBON	
	R738	QRD167J-103	10K	1/6W	CARBON	
	R739	QRD167J-221	220	1/6W	CARBON	
	R740	QRD167J-221	220	1/6W	CARBON	
	R741	QRD167J-221	220	1/6W	CARBON	
	R742	QRD167J-221	220	1/6W	CARBON	
	R743	QRD167J-271	270	1/6W	CARBON	
	R744	QRD167J-271	270	1/6W	CARBON	
	R745	QRD167J-271	270	1/6W	CARBON	
	R746	QRD167J-271	270	1/6W	CARBON	
	R747	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R748	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R749	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R750	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R751	QRD167J-511	510	1/6W	CARBON	
	R752	QRD167J-511	510	1/6W	CARBON	
	R753	QRD167J-511	510	1/6W	CARBON	
	R754	QRD167J-511	510	1/6W	CARBON	
	R755	QRD167J-471	470	1/6W	CARBON	
	R756	QRD167J-471	470	1/6W	CARBON	
	R757	QRD167J-101	100	1/6W	CARBON	
	R758	QRD167J-101	100	1/6W	CARBON	
	R759	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R760	ERT-D2WFL351S	350	1/4W	THERMISTOR	
	R761	QRD167J-391	390	1/6W	CARBON	
	R762	QRD167J-391	390	1/6W	CARBON	
	R763	SDT250			THERMISTER	
	R764	SDT250			THERMISTER	
⚠	R765	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R766	QRD145J-272S	2.7K	1/4W	UNF.CARBON	
⚠	R767	QRD145J-271S	270	1/4W	UNF.CARBON	
⚠	R768	QRD145J-271S	270	1/4W	UNF.CARBON	
⚠	R769	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R770	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R771	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R772	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R773	ERF032K-R22	0.22	3W	CEMENT	
⚠	R774	ERF032K-R22	0.22	3W	CEMENT	

⚠ : SAFETY PARTS

Printed Circuit Board Ass'y and Parts List

■ ENH-125 ☐ Power Amplifier PC Board Ass'y

Note: ENH-125☐ varies according to the areas employed. See note (1) when placing an order.


A
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ENH-125-3
ENH-125-4
ENH-125-5
ENH-125-2
ENH-125 -1 E11895-003
TK-437 94V-0A
J901
FW902
P801
P803
P804
P805
P806
IC701
IC702
IC901
FW801
IDLING VOL

Note (1)

PC Board Ass'y	Designated Areas
ENB-085 A	the U. S. A., Canada
ENB-085 B	Other Countries
ENB-085 C	Europe, Australia
ENB-085 D	Europe(with LW), the U.K.(with LW)
ENB-085 E	West Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q421	2SC458(C,D)	SILICON	HITACHI	
	Q422	2SC458(C,D)	SILICON	HITACHI	
	Q461	2SC458(C,D)	SILICON	HITACHI	
	Q462	2SC458(C,D)	SILICON	HITACHI	
	Q463	DTC144ES	SILICON	ROHM	
	Q471	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC421	LC6514B-4054	I.C.	SANYO	
	IC461	MN17581JSX2	I.C.	MATSUSHITA	
	IC462	LC3517BS-15	I.C.	SANYO	
	IC463	MSC7112-01SS	I.C.		
	IC464	A1QH3021HO	I.C.	SHARP	
	IC471	MN1280(P,Q)	I.C.	MATSUSHITA	
	IC581	TC9162N	I.C.	TOSHIBA	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D411	1SS119	SILICON	HITACHI	
	D412	1SS119	SILICON	HITACHI	
	D413	1SS119	SILICON	HITACHI	
	D421	1SS119	SILICON	HITACHI	
	D422	1SS119	SILICON	HITACHI	
	D423	1SS119	SILICON	HITACHI	
	D424	1SS119	SILICON	HITACHI	
	D425	1SS119	SILICON	HITACHI	
	D426	1SS119	SILICON	HITACHI	
	D427	1SS119	SILICON	HITACHI	
	D428	1SS119	SILICON	HITACHI	
	D430	1SS119	SILICON	HITACHI	
	D431	1SS119	SILICON	HITACHI	
	D432	1SS119	SILICON	HITACHI	
	D433	1SS119	SILICON	HITACHI	
	D434	1SS119	SILICON	HITACHI	
	D435	1SS119	SILICON	HITACHI	
	D436	1SS119	SILICON	HITACHI	A
	D437	1SS119	SILICON	HITACHI	C
	D437	1SS119	SILICON	HITACHI	D
	D437	1SS119	SILICON	HITACHI	E
	D438	1SS119	SILICON	HITACHI	D
	D439	1SS119	SILICON	HITACHI	B
	D441	MTZ8.2JC	ZENER	ROHM	
	D442	MTZ8.2JC	ZENER	ROHM	
	D443	MTZ8.2JC	ZENER	ROHM	
	D444	MTZ8.2JC	ZENER	ROHM	
	D445	MTZ8.2JC	ZENER	ROHM	
	D446	MTZ8.2JC	ZENER	ROHM	
	D447	MTZ8.2JC	ZENER	ROHM	
	D448	MTZ7.5JC	ZENER	ROHM	
	D449	MTZ7.5JC	ZENER	ROHM	
	D450	MTZ7.5JC	ZENER	ROHM	
	D451	MTZ7.5JC	ZENER	ROHM	
	D452	MTZ7.5JC	ZENER	ROHM	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D453	MTZ7.5JC	ZENER	ROHM	
	D454	MTZ7.5JC	ZENER	ROHM	
	D455	MTZ7.5JC	ZENER	ROHM	
	D460	1SS119	SILICON	HITACHI	
	D461	1SS119	SILICON	HITACHI	
	D462	1SS119	SILICON	HITACHI	
	D463	1SS119	SILICON	HITACHI	
	D464	1SS119	SILICON	HITACHI	
	D465	1SS119	SILICON	HITACHI	
	D466	1SS119	SILICON	HITACHI	
	D467	1SS119	SILICON	HITACHI	
	D468	1SS119	SILICON	HITACHI	
	D469	1SS119	SILICON	HITACHI	
	D471	1SS119	SILICON	HITACHI	
	D473	1SS119	SILICON	HITACHI	
	D474	1SS119	SILICON	HITACHI	
	D475	1SS119	SILICON	HITACHI	
	D476	1SS119	SILICON	HITACHI	
	D477	1SS119	SILICON	HITACHI	
	D481	SLH-34VC50F	L.E.D.	ROHM	
	D581	1SS119	SILICON	HITACHI	
	D582	1SS119	SILICON	HITACHI	
	D583	1SS119	SILICON	HITACHI	
	D584	1SS119	SILICON	HITACHI	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C421	EEZ0603-108	1000MF		ELECTRO	
	C422	QCZ0202-155	1.5MF	25V	CERAMIC	
	C423	QCBB1HK-101	100PF	50V	CERAMIC	
	C424	QCBB1HK-101	100PF	50V	CERAMIC	
	C461	QETB0JM-477	470MF	6.3V	ELECTRO	
	C462	QCZ0202-155	1.5MF	25V	CERAMIC	
	C463	QETB1AM-107	100MF	10V	ELECTRO	
	C464	QCF21HP-223	0.022MF	50V	CERAMIC	
	C465	QETB1AM-107	100MF	10V	ELECTRO	
	C466	QCZ0202-155	1.5MF	25V	CERAMIC	
	C467	QCBB1HK-101	100PF	50V	CERAMIC	
	C468	QCBB1HK-221	220PF	50V	CERAMIC	
	C469	QCZ0202-155	1.5MF	25V	CERAMIC	
	C471	QETB1HM-225	2.2MF	50V	ELECTRO	
	C472	EEZ0502-479	47000MF	5.5V	ELECTRO	
	C473	QCBB1HK-391	390PF	50V	CERAMIC	
	C481	QETB1HM-105	1MF	50V	ELECTRO	
	C581	QCF21HP-223	0.022MF	50V	CERAMIC	
	C582	QCF21HP-223	0.022MF	50V	CERAMIC	
	C583	QCF21HP-223	0.022MF	50V	CERAMIC	
	C584	QCF21HP-223	0.022MF	50V	CERAMIC	
	C585	QCS21HJ-331	330PF	50V	CERAMIC	E
	C586	QCS21HJ-331	330PF	50V	CERAMIC	E
	C589	QCS21HJ-101	100PF	50V	CERAMIC	E
	C590	QCS21HJ-101	100PF	50V	CERAMIC	E
	C591	QCS21HJ-331	330PF	50V	CERAMIC	E
	C592	QCS21HJ-331	330PF	50V	CERAMIC	E
	C595	QCS21HJ-101	100PF	50V	CERAMIC	E
	C596	QCS21HJ-101	100PF	50V	CERAMIC	E
	C597	QCS21HJ-331	330PF	50V	CERAMIC	E
	C598	QCS21HJ-331	330PF	50V	CERAMIC	E

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R421	QRD167J-105	1M	1/6W	CARBON	
	R422	QRD167J-152	1.5K	1/6W	CARBON	
	R423	QRD167J-103	10K	1/6W	CARBON	
	R427	QRD167J-103	10K	1/6W	CARBON	
	R428	QRD167J-103	10K	1/6W	CARBON	
	R431	QRD167J-103	10K	1/6W	CARBON	
	R432	QRD167J-471	470	1/6W	CARBON	
	R433	QRD167J-473	47K	1/6W	CARBON	
	R434	QRD167J-223	22K	1/6W	CARBON	
	R435	QRD167J-103	10K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R461	QRD167J-473	47K	1/6W	CARBON	
	R462	QRD167J-473	47K	1/6W	CARBON	
	R463	QRD167J-473	47K	1/6W	CARBON	
	R464	QRD167J-473	47K	1/6W	CARBON	
	R465	QRD167J-104	100K	1/6W	CARBON	
	R466	QRD167J-473	47K	1/6W	CARBON	
	R467	QRD167J-104	100K	1/6W	CARBON	
	R468	QRD167J-104	100K	1/6W	CARBON	
	R469	QRD167J-104	100K	1/6W	CARBON	
	R470	QRD167J-103	10K	1/6W	CARBON	
	R471	QRD167J-104	100K	1/6W	CARBON	
	R472	QRD167J-221	220	1/6W	CARBON	
	R473	QRD167J-273	27K	1/6W	CARBON	
	R474	QRD167J-103	10K	1/6W	CARBON	
	R475	QRD167J-104	100K	1/6W	CARBON	
	R476	QRD167J-103	10K	1/6W	CARBON	
	R477	QRD167J-471	470	1/6W	CARBON	
	R478	QRD167J-473	47K	1/6W	CARBON	
	R479	QRD167J-223	22K	1/6W	CARBON	
	R480	QRD167J-103	10K	1/6W	CARBON	
	R481	QRD167J-104	100K	1/6W	CARBON	
	R482	QRD167J-104	100K	1/6W	CARBON	
	R483	QRD167J-104	100K	1/6W	CARBON	
	R484	QRD167J-331	330	1/6W	CARBON	
	R485	QRD167J-3R9	3.9	1/6W	CARBON	
	R486	QRD167J-221	220	1/6W	CARBON	
	R488	QRD167J-272	2.7K	1/6W	CARBON	
⚠	R581	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R581	QRD145J-680S	68	1/4W	UNF.CARBON	B
⚠	R581	QRZ0062-680	68	1/4W	FUSIBLE	C
⚠	R581	QRZ0062-680	68	1/4W	FUSIBLE	D
⚠	R581	QRZ0062-680	68	1/4W	FUSIBLE	E
⚠	R582	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R582	QRD145J-680S	68	1/4W	UNF.CARBON	B
⚠	R582	QRZ0062-680	68	1/4W	FUSIBLE	C
⚠	R582	QRZ0062-680	68	1/4W	FUSIBLE	D
⚠	R582	QRZ0062-680	68	1/4W	FUSIBLE	E
	R583	QRD167J-221	220	1/6W	CARBON	A
	R583	QRD167J-221	220	1/6W	CARBON	B
	R583	QRD167J-221	220	1/6W	CARBON	C
	R583	QRD167J-221	220	1/6W	CARBON	D
	R583	QRD167J-222	2.2K	1/6W	CARBON	E
	R584	QRD167J-221	220	1/6W	CARBON	A
	R584	QRD167J-221	220	1/6W	CARBON	B
	R584	QRD167J-221	220	1/6W	CARBON	C
	R584	QRD167J-221	220	1/6W	CARBON	D
	R584	QRD167J-222	2.2K	1/6W	CARBON	E
	R585	QRD167J-221	220	1/6W	CARBON	
	R586	QRD167J-221	220	1/6W	CARBON	
	R587	QRD167J-221	220	1/6W	CARBON	A
	R587	QRD167J-221	220	1/6W	CARBON	B
	R587	QRD167J-221	220	1/6W	CARBON	C
	R587	QRD167J-221	220	1/6W	CARBON	D
	R587	QRD167J-222	2.2K	1/6W	CARBON	E
	R588	QRD167J-221	220	1/6W	CARBON	A
	R588	QRD167J-221	220	1/6W	CARBON	B
	R588	QRD167J-221	220	1/6W	CARBON	C
	R588	QRD167J-221	220	1/6W	CARBON	D
	R588	QRD167J-222	2.2K	1/6W	CARBON	E
	R589	QRD167J-221	220	1/6W	CARBON	
	R590	QRD167J-221	220	1/6W	CARBON	
	R591	QRD167J-471	470	1/6W	CARBON	
	R592	QRD167J-471	470	1/6W	CARBON	
	R593	QRD167J-332	3.3K	1/6W	CARBON	
	R594	QRD167J-332	3.3K	1/6W	CARBON	
	RA421	QRB075J-104	100K	1/8W	R.NETWORK	
	RA422	QRB085J-104	100K	1/8W	R.NETWORK	
	RA423	QRB045J-473	47K	1/8W	R.NETWORK	
	VR581	QVAA99W-EF5C	250K		VARIABLE	

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11899-003	CIRCUIT BOARD	
		E3400-376	FELT SPACER	
	J581	EMN00TV-405A	4P PIN JACK	
	J582	EMN00TV-602A	6P PIN JACK	
	P421	EMV7112-003	CONNECTOR	B
	P442	EMV7112-003	CONNECTOR	
	P451	EMV7112-008	CONNECTOR	
	P452	EMV7112-006	CONNECTOR	
	S421	ESP0001-018	TACT SWITCH	
	S422	ESP0001-018	TACT SWITCH	
	S423	ESP0001-018	TACT SWITCH	
	S424	ESP0001-018	TACT SWITCH	
	S425	ESP0001-018	TACT SWITCH	
	S426	ESP0001-018	TACT SWITCH	
	S427	ESP0001-018	TACT SWITCH	
	S428	ESP0001-018	TACT SWITCH	
	S429	ESP0001-018	TACT SWITCH	
	S430	ESP0001-018	TACT SWITCH	
	S431	ESP0001-018	TACT SWITCH	
	S432	ESP0001-018	TACT SWITCH	
	S433	ESP0001-018	TACT SWITCH	
	S434	ESP0001-018	TACT SWITCH	
	S435	ESP0001-018	TACT SWITCH	
	S436	ESP0001-018	TACT SWITCH	
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	S439	ESP0001-018	TACT SWITCH	
	S441	ESP0001-018	TACT SWITCH	
	S442	ESP0001-018	TACT SWITCH	
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	S472	ESP0001-018	TACT SWITCH	
	S473	ESP0001-018	TACT SWITCH	
	S481	ESP0001-018	TACT SWITCH	
	S482	ESP0001-018	TACT SWITCH	
	S483	ESP0001-018	TACT SWITCH	
	S484	ESP0001-018	TACT SWITCH	
	DA421	DAN601	DIODE ARRAY	
	DA422	DAN601	DIODE ARRAY	
	FL461	ELU0001-070	FL TUBE	
	FW201	EWR37B-20KST	FLAT WIRE	
	FW442	EWR33B-08KST	FLAT WIRE	
	FW443	EWR34B-16SST	FLAT WIRE	
	FW803	EWR34B-35KST	FLAT WIRE	
	FW852	EWR34B-35KST	FLAT WIRE	
	PA304	EMV7125-016R	CONNECTOR	
	PA305	EMV7125-005R	CONNECTOR	
	PA441	EMV7123-032R	CONNECTOR	
	PB441	EMV7123-032	CONNECTOR	
	XT421	ECX0001-000KS	RESONATOR	
	XT461	ECX0072-000EM	RESONATOR	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R775	QRD125J-470	47	1/2W	UNF.CARBON	
⚠	R776	QRD125J-470	47	1/2W	UNF.CARBON	
⚠	R777	QRG022J-100A	10	2W	O.M.FILM	
⚠	R778	QRG022J-100A	10	2W	O.M.FILM	
⚠	R779	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R780	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R781	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R782	QRD145J-100S	10	1/4W	UNF.CARBON	
	R801	QRD167J-104	100K	1/6W	CARBON	
	R802	QRD167J-104	100K	1/6W	CARBON	
⚠	R812	QRG022J-181A	180	2W	O.M.FILM	
⚠	R813	QRG022J-181A	180	2W	O.M.FILM	
⚠	R814	QRD125J-272	2.7K	1/2W	UNF.CARBON	
	R816	QRD167J-220	22	1/6W	CARBON	
	R817	QRD167J-220	22	1/6W	CARBON	
⚠	R818	QRD145J-150S	15	1/4W	UNF.CARBON	A
⚠	R818	QRD145J-150S	15	1/4W	UNF.CARBON	B
⚠	R818	QRD145J-150S	15	1/4W	UNF.CARBON	C
⚠	R818	QRZ0062-150	15	1/4W	FUSIBLE	D
⚠	R818	QRZ0062-150	15	1/4W	FUSIBLE	E
⚠	R818	QRZ0062-150	15	1/4W	FUSIBLE	F
⚠	R819	QRX022J-R22A	0.22	2W	M.FILM	
⚠	R820	QRX022J-R22A	0.22	2W	M.FILM	
	R901	QRD167J-102	1K	1/6W	CARBON	
	R902	QRD167J-102	1K	1/6W	CARBON	
	R903	QRD167J-562	5.6K	1/6W	CARBON	
	R904	QRD167J-562	5.6K	1/6W	CARBON	
	R905	QRD167J-123	12K	1/6W	CARBON	
	R906	QRD167J-123	12K	1/6W	CARBON	
	R907	QRD167J-102	1K	1/6W	CARBON	
	R908	QRD167J-102	1K	1/6W	CARBON	
	R909	QRD167J-103	10K	1/6W	CARBON	
	R911	QRD167J-332	3.3K	1/6W	CARBON	
	R912	QRD167J-473	47K	1/6W	CARBON	
	R913	QRD167J-104	100K	1/6W	CARBON	
	R914	QRD167J-823	82K	1/6W	CARBON	
	R915	QRD167J-823	82K	1/6W	CARBON	
	R916	QRD167J-563	56K	1/6W	CARBON	
	R917	QRD167J-683	68K	1/6W	CARBON	
	R918	QRD167J-392	3.9K	1/6W	CARBON	
	R921	QRD167J-224	220K	1/6W	CARBON	
	R922	QRD167J-562	5.6K	1/6W	CARBON	
⚠	R924	QRG022J-222A	2.2K	2W	O.M.FILM	
	R925	QRD167J-121	120	1/6W	CARBON	
	R926	QRD167J-101	100	1/6W	CARBON	
	R927	QRD167J-101	100	1/6W	CARBON	
	R928	QRD167J-151	150	1/6W	CARBON	
⚠	R929	QRD145J-470S	47	1/4W	UNF.CARBON	
	R930	QRD167J-472	4.7K	1/6W	CARBON	
	R931	QRD167J-123	12K	1/6W	CARBON	
	R932	QRD167J-162	1.6K	1/6W	CARBON	
⚠	R933	QRG022J-222A	2.2K	2W	O.M.FILM	
	R934	QRD167J-162	1.6K	1/6W	CARBON	
⚠	R941	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R942	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R943	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R944	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R973	QRG022J-471A	470	2W	O.M.FILM	
⚠	R974	QRG022J-471A	470	2W	O.M.FILM	
	VR701	QVPE601-501	500	0.15W	VARIABLE	
	VR702	QVPE601-501	500	0.15W	VARIABLE	

⚠ : SAFETY PARTS

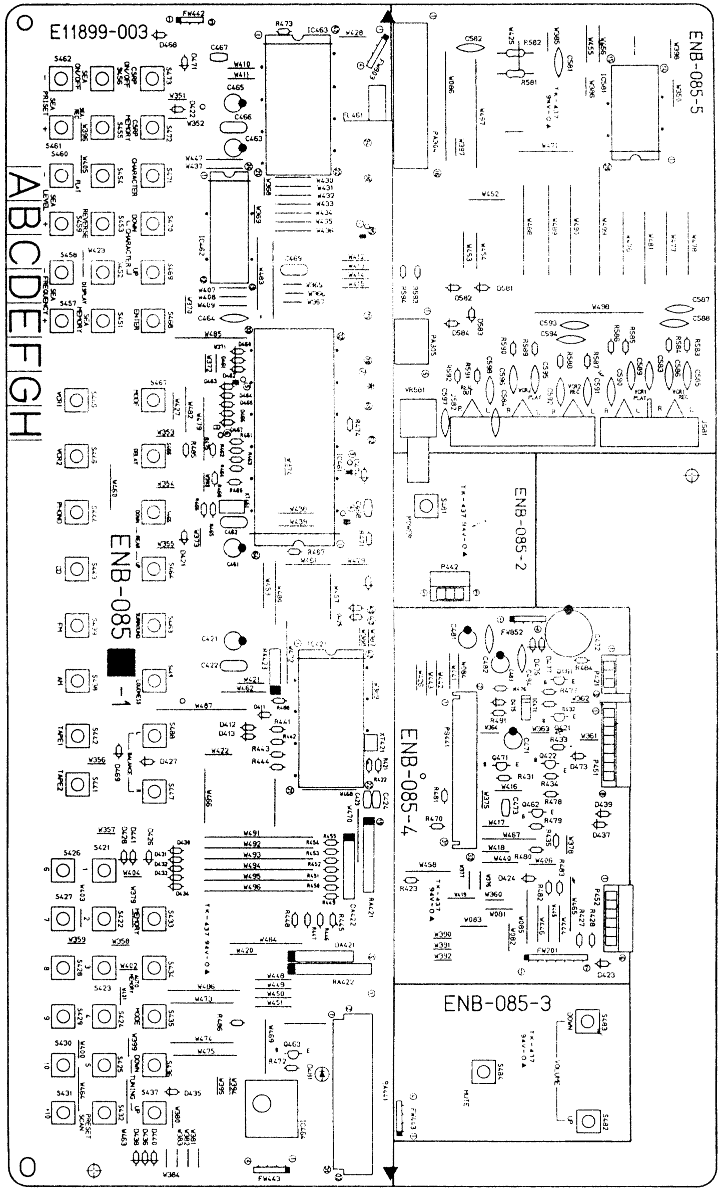
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EWH23A-16RR	TWIST PARA WIRE	
		E11895-003	CIRCUIT BOARD	
		E305265-002	BRACKET	
		E305266-002	BRACKET	
		E306101-001	HEAT SINK	
		E70225-001	EARTH PLATE	F
		E70859-001	EARTH PLATE	
		E73525-003	SCREW	
		SBSG3008CC	SCREW	
		SBSG3008CC	SCREW	
		SBSG3008CC	SCREW	
	J341	EMN00YV-304A	3P PIN JACK	
	J342	EMN00YV-205A	2P PIN JACK	
	J701	EMB90TV-801A	SPEAKER TERMINAL	
	J801	E67764-103	WRAPPING TERMINAL	
	J802	E67764-103	WRAPPING TERMINAL	
	J901	QMS6A40-021	HEADPHONE JACK	
	L701	EQL0101-1R2	INDUCTOR	
	L702	EQL0101-1R2	INDUCTOR	
	P801	EMV7112-003R	CONNECTOR	
	P802	EMV7112-008	CONNECTOR	
	P803	EMV7112-004	CONNECTOR	
	P804	EMV7112-007	CONNECTOR	
	P806	EMV7112-003	CONNECTOR	
	S901	QST4231-E01	PUSH SWITCH	
	S902	QST4231-E01	PUSH SWITCH	
	FW307	EWR23C-30JN	FLAT WIRE	
	FW801	EWR33B-45KST	FLAT WIRE	
	FW806	EWR33B-20KST	FLAT WIRE	
	FW901	EWR34B-16SST	FLAT WIRE	
	FW902	EWR36B-40SST	FLAT WIRE	
	FW903	EWR33B-10SST	FLAT WIRE	
	PA306	EMV7125-004R	CONNECTOR	
	RY901	ESK5D24-218	RELAY	

⚠ : SAFETY PARTS

■ ENB-085☐ Front Control PC Board Ass'y

Note: ENB-085☐ varies according to the areas employed. See note (1) when placing an order.



Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
	R509	QRD167J-103	10K 1/6W CARBON	
	R510	QRD167J-103	10K 1/6W CARBON	
	R511	QRD167J-103	10K 1/6W CARBON	
	R512	QRD167J-103	10K 1/6W CARBON	
	R513	QRD167J-224	220K 1/6W CARBON	
	R514	QRD167J-224	220K 1/6W CARBON	
	R515	QRD167J-224	220K 1/6W CARBON	
	R516	QRD167J-224	220K 1/6W CARBON	
	R517	QRD167J-223	22K 1/6W CARBON	
	R518	QRD167J-223	22K 1/6W CARBON	
	R519	QRD167J-333	33K 1/6W CARBON	
	R520	QRD167J-333	33K 1/6W CARBON	
	R521	QRD167J-104	100K 1/6W CARBON	
	R522	QRD167J-104	100K 1/6W CARBON	
	R523	QRD167J-474	470K 1/6W CARBON	
	R524	QRD167J-474	470K 1/6W CARBON	
	R525	QRD167J-105	1M 1/6W CARBON	
	R526	QRD167J-105	1M 1/6W CARBON	
⚠	R531	QRD145J-680S	68 1/4W UNF.CARBON	A
⚠	R531	QRD145J-680S	68 1/4W UNF.CARBON	B
⚠	R531	QRZ0062-680	68 1/4W FUSIBLE	C
⚠	R531	QRZ0062-680	68 1/4W FUSIBLE	D
⚠	R532	QRD145J-680S	68 1/4W UNF.CARBON	A
⚠	R532	QRD145J-680S	68 1/4W UNF.CARBON	B
⚠	R532	QRZ0062-680	68 1/4W FUSIBLE	C
⚠	R532	QRZ0062-680	68 1/4W FUSIBLE	D
⚠	R533	QRD145J-221S	220 1/4W UNF.CARBON	
⚠	R534	QRD145J-271S	270 1/4W UNF.CARBON	
	R537	QRD167J-681	680 1/6W CARBON	
	R538	QRD167J-272	2.7K 1/6W CARBON	
	R561	QRD167J-104	100K 1/6W CARBON	
	R562	QRD167J-104	100K 1/6W CARBON	
	R563	QRD167J-103	10K 1/6W CARBON	
	R564	QRD167J-103	10K 1/6W CARBON	
	R565	QRD167J-103	10K 1/6W CARBON	
	R566	QRD167J-103	10K 1/6W CARBON	
	R567	QRD167J-105	1M 1/6W CARBON	
	R568	QRD167J-105	1M 1/6W CARBON	
⚠	R569	QRD145J-680S	68 1/4W UNF.CARBON	A
⚠	R569	QRD145J-680S	68 1/4W UNF.CARBON	B
⚠	R569	QRZ0062-680	68 1/4W FUSIBLE	C
⚠	R569	QRZ0062-680	68 1/4W FUSIBLE	D
⚠	R570	QRD145J-680S	68 1/4W UNF.CARBON	A
⚠	R570	QRD145J-680S	68 1/4W UNF.CARBON	B
⚠	R570	QRZ0062-680	68 1/4W FUSIBLE	C
⚠	R570	QRZ0062-680	68 1/4W FUSIBLE	D
	R571	QRD167J-103	10K 1/6W CARBON	
	R572	QRD167J-103	10K 1/6W CARBON	
	R573	QRD167J-103	10K 1/6W CARBON	
	R574	QRD167J-103	10K 1/6W CARBON	
	R575	QRD167J-333	33K 1/6W CARBON	
	R576	QRD167J-104	100K 1/6W CARBON	
	R578	QRD167J-100	10 1/6W CARBON	
	RA501	QRB069J-474	470K 1/10W R.NETWORK	
	RA502	QRB069J-474	470K 1/10W R.NETWORK	

⚠ : SAFETY PARTS

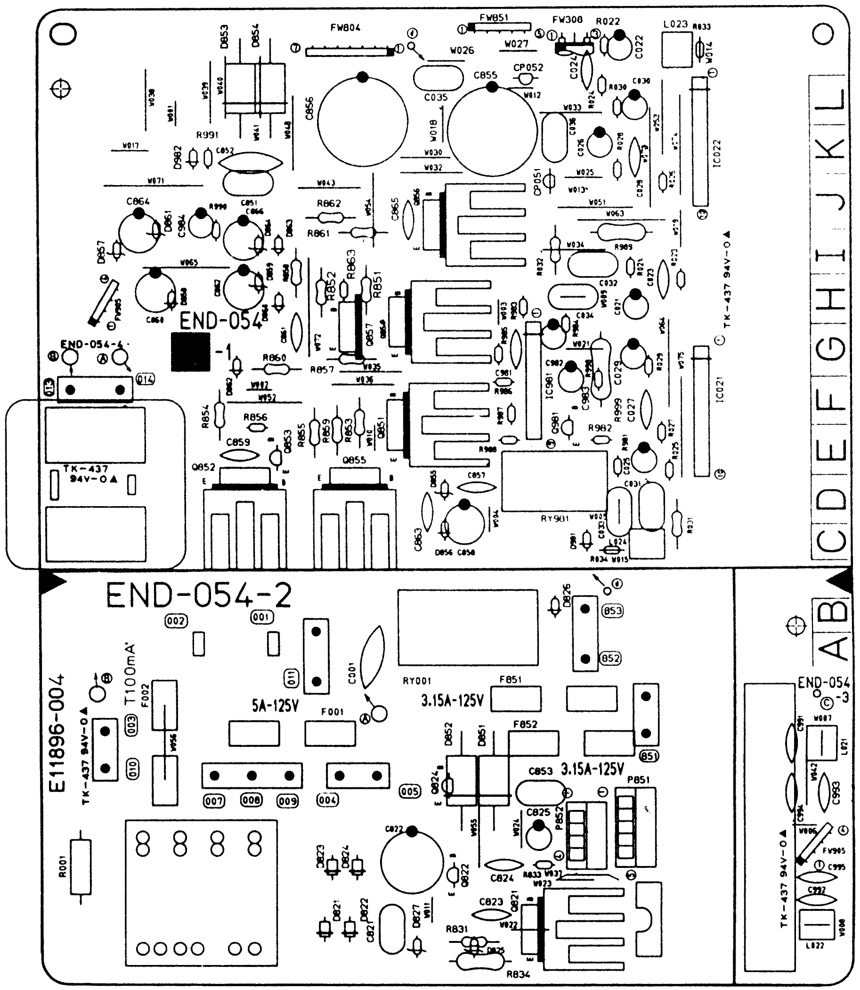
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11898-003	CIRCUIT BOARD	
		E70859-001	EARTH PLATE	
	J571	QMS3L10-0A0	MINI JACK	
	J572	QMS3L10-0A0	MINI JACK	
	P307	EMV7112-003	CONNECTOR	
	P308	EMV7112-003	CONNECTOR	
	FW421	EWR33B-30KST	FLAT WIRE	B
	FW451	EWR38B-25KST	FLAT WIRE	
	FW452	EWR36B-25KST	FLAT WIRE	
	FW802	EWR38B-25KST	FLAT WIRE	
	PB301	EMV5125-007	PLUG ASSY	
	PB302	EMV5125-004	PLUG ASSY	
	PB303	EMV5125-016	PLUG ASSY	
	PB304	EMV5125-016	PLUG ASSY	
	PB305	EMV5125-005	PLUG ASSY	
	PB306	EMV5125-004	PLUG ASSY	
	PB309	EMV5125-007	PLUG ASSY	
	PB310	EMV5125-009	PLUG ASSY	
	TP501	QMV5005-002K	PLUG ASSY	

⚠ : SAFETY PARTS

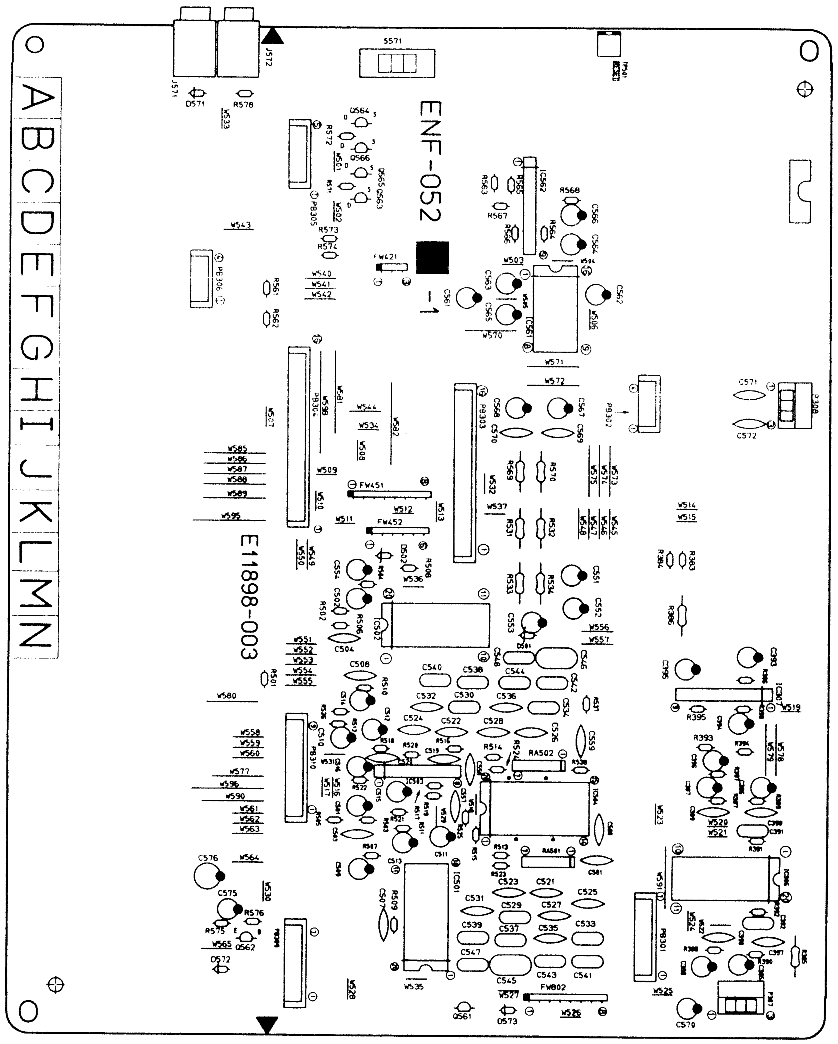
■ END-054 ☐ Rear Amplifier PC Board Ass'y

Note:END-054☐ varies according to the areas employed. See note (1) when placing an order.



■ ENF-052 ☐ Switch & SEA Volume PC Board Ass'y

Note:ENF-052 ☐ varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENF-052 A	the U. S. A., Canada
ENF-052 B	Other Countries
ENF-052 C	Europe, Australia, Europe(with LW), the U.K.(with LW)
ENF-052 D	West Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q561	DTC144ES	SILICON	ROHM	
	Q562	DTA114YS	SILICON	ROHM	
	Q563	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q564	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q565	2SK301(P,Q)	F.E.T	MATSUSHITA	
	Q566	2SK301(P,Q)	F.E.T	MATSUSHITA	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC306	TC9177P	I.C.	TOSHIBA	
	IC307	NJM4560SD	I.C.	JRC	
	IC501	LA3607S	I.C.	SANYO	
	IC502	LA3607S	I.C.	SANYO	
	IC503	M5218L-R	I.C.	MITSUBISHI	
	IC504	LC7522	I.C.	SANYO	
	IC561	TC9176P	I.C.	TOSHIBA	
	IC562	NJM4560SD	I.C.	JRC	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	D501	RD6.8JSB3	ZENER	NEC	
	D502	RD6.8JSB3	ZENER	NEC	
	D571	1SS133	SILICON	ROHM	
	D572	1SS133	SILICON	ROHM	
	D573	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C385	QETB1EM-476	47MF	25V	ELECTRO	
	C386	QETB1EM-476	47MF	25V	ELECTRO	
	C387	QETB1HM-475	4.7MF	50V	ELECTRO	
	C388	QETB1HM-475	4.7MF	50V	ELECTRO	
	C389	QCS21HJ-181	180PF	50V	CERAMIC	
	C390	QCS21HJ-181	180PF	50V	CERAMIC	
	C391	QFN81HK-333	0.033MF	50V	MYLAR	
	C392	QFN81HK-333	0.033MF	50V	MYLAR	
	C393	QETB1HM-105	1MF	50V	ELECTRO	
	C394	QETB1HM-105	1MF	50V	ELECTRO	
	C395	QETB1EM-106	10MF	25V	ELECTRO	
	C396	QETB1EM-106	10MF	25V	ELECTRO	
	C501	QETB1EM-106	10MF	25V	ELECTRO	
	C502	QETB1EM-106	10MF	25V	ELECTRO	
	C503	QCS21HJ-470	47PF	50V	CERAMIC	
	C504	QCS21HJ-470	47PF	50V	CERAMIC	
	C507	QCS21HJ-101	100PF	50V	CERAMIC	
	C508	QCS21HJ-101	100PF	50V	CERAMIC	
	C509	QETB1CM-226	22MF	16V	ELECTRO	
	C510	QETB1CM-226	22MF	16V	ELECTRO	
	C511	QETB1HM-475	4.7MF	50V	ELECTRO	
	C512	QETB1HM-475	4.7MF	50V	ELECTRO	
	C513	QETB1CM-226	22MF	16V	ELECTRO	
	C514	QETB1CM-226	22MF	16V	ELECTRO	
	C515	QETB1EM-106	10MF	25V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C516	QETB1EM-106	10MF	25V	ELECTRO	
	C519	QCS21HJ-100A	10PF	50V	CERAMIC	
	C520	QCS21HJ-100A	10PF	50V	CERAMIC	
	C521	QCY21HK-272	2700PF	50V	CERAMIC	
	C522	QCY21HK-272	2700PF	50V	CERAMIC	
	C523	QCS21HJ-471	470PF	50V	CERAMIC	
	C524	QCS21HJ-471	470PF	50V	CERAMIC	
	C525	QCY21HK-682	6800PF	50V	CERAMIC	
	C526	QCY21HK-682	6800PF	50V	CERAMIC	
	C527	QCY21HK-122	1200PF	50V	CERAMIC	
	C528	QCY21HK-122	1200PF	50V	CERAMIC	
	C529	QFN81HK-183	0.018MF	50V	MYLAR	
	C530	QFN81HK-183	0.018MF	50V	MYLAR	
	C531	QCY21HK-272	2700PF	50V	CERAMIC	
	C532	QCY21HK-272	2700PF	50V	CERAMIC	
	C533	QFN81HK-473	0.047MF	50V	MYLAR	
	C534	QFN81HK-473	0.047MF	50V	MYLAR	
	C535	QCY21HK-682	6800PF	50V	CERAMIC	
	C536	QCY21HK-682	6800PF	50V	CERAMIC	
	C537	QFN81HK-104	0.1MF	50V	MYLAR	
	C538	QFN81HK-104	0.1MF	50V	MYLAR	
	C539	QFN81HK-183	0.018MF	50V	MYLAR	
	C540	QFN81HK-183	0.018MF	50V	MYLAR	
	C541	QFV81HJ-274	0.27MF	50V	T.FILM	
	C542	QFV81HJ-274	0.27MF	50V	T.FILM	
	C543	QFN81HK-473	0.047MF	50V	MYLAR	
	C544	QFN81HK-473	0.047MF	50V	MYLAR	
	C545	QFV81HJ-684	0.68MF	50V	T.FILM	
	C546	QFV81HJ-684	0.68MF	50V	T.FILM	
	C547	QFN81HK-124	0.12MF	50V	MYLAR	
	C548	QFN81HK-124	0.12MF	50V	MYLAR	
	C551	QETB1EM-107	100MF	25V	ELECTRO	
	C552	QETB1EM-107	100MF	25V	ELECTRO	
	C553	QETB1HM-475	4.7MF	50V	ELECTRO	
	C554	QETB1HM-475	4.7MF	50V	ELECTRO	
	C557	QCF21HP-223	0.022MF	50V	CERAMIC	
	C558	QCF21HP-223	0.022MF	50V	CERAMIC	
	C559	QCF21HP-223	0.022MF	50V	CERAMIC	
	C561	QETB1HM-475	4.7MF	50V	ELECTRO	
	C562	QETB1HM-475	4.7MF	50V	ELECTRO	
	C563	QETB1HM-105	1MF	50V	ELECTRO	
	C564	QETB1HM-105	1MF	50V	ELECTRO	
	C565	QETB1EM-106	10MF	25V	ELECTRO	
	C566	QETB1EM-106	10MF	25V	ELECTRO	
	C567	QETB1EM-476	47MF	25V	ELECTRO	
	C568	QETB1EM-476	47MF	25V	ELECTRO	
	C570	QETB1AM-476	47MF	10V	ELECTRO	
	C575	QETB1HM-475	4.7MF	50V	ELECTRO	
	C576	QETB1EM-227	220MF	25V	ELECTRO	
	C580	QCF21HP-223	0.022MF	50V	CERAMIC	

⚠ : SAFETY PARTS

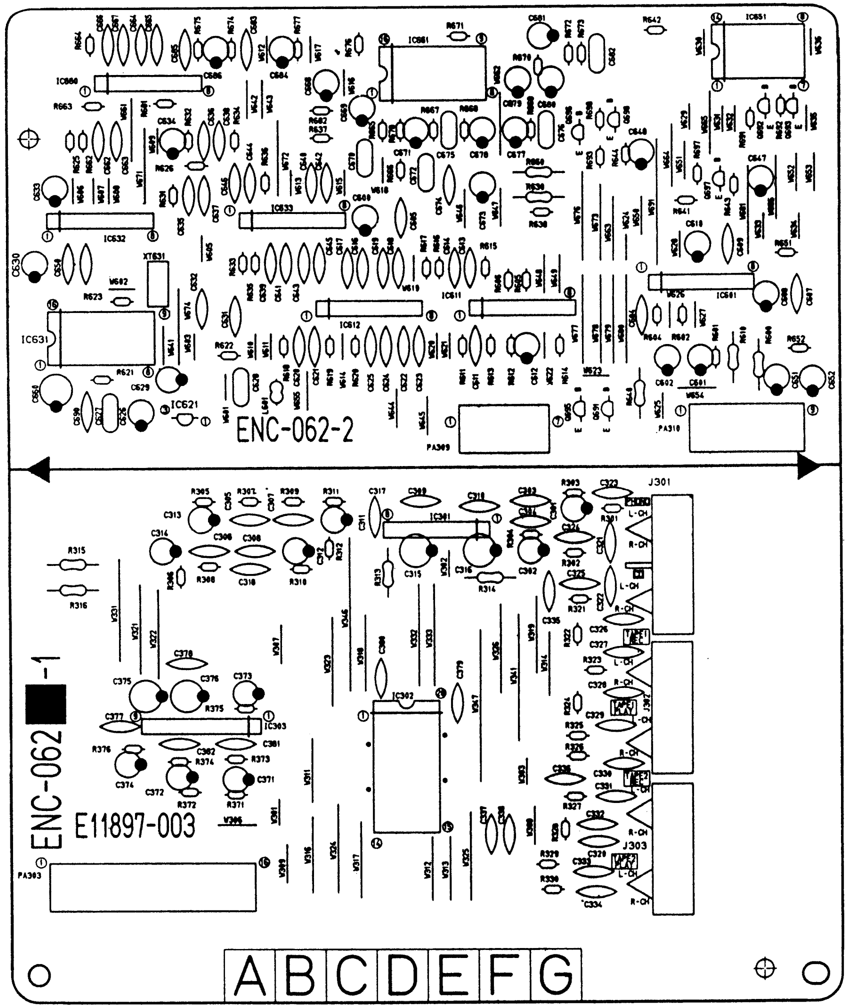
Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R383	QRD167J-104	100K	1/6W	CARBON	
	R384	QRD167J-104	100K	1/6W	CARBON	
⚠	R385	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R385	QRD145J-680S	68	1/4W	UNF.CARBON	B
⚠	R385	QRZ0062-680	68	1/4W	FUSIBLE	C
⚠	R385	QRZ0062-680	68	1/4W	FUSIBLE	D
⚠	R386	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R386	QRD145J-680S	68	1/4W	UNF.CARBON	B
⚠	R386	QRZ0062-680	68	1/4W	FUSIBLE	C
⚠	R386	QRZ0062-680	68	1/4W	FUSIBLE	D
	R387	QRD167J-563	56K	1/6W	CARBON	
	R388	QRD167J-563	56K	1/6W	CARBON	
	R389	QRD167J-105	1M	1/6W	CARBON	
	R390	QRD167J-105	1M	1/6W	CARBON	
	R391	QRD167J-563	56K	1/6W	CARBON	
	R392	QRD167J-563	56K	1/6W	CARBON	
	R393	QRD167J-105	1M	1/6W	CARBON	
	R394	QRD167J-105	1M	1/6W	CARBON	
	R395	QRD167J-103	10K	1/6W	CARBON	
	R396	QRD167J-103	10K	1/6W	CARBON	
	R397	QRD167J-103	10K	1/6W	CARBON	
	R398	QRD167J-103	10K	1/6W	CARBON	
	R501	QRD167J-153	15K	1/6W	CARBON	
	R502	QRD167J-153	15K	1/6W	CARBON	
	R503	QRD167J-104	100K	1/6W	CARBON	
	R504	QRD167J-104	100K	1/6W	CARBON	
	R505	QRD167J-823	82K	1/6W	CARBON	
	R506	QRD167J-823	82K	1/6W	CARBON	
	R507	QRD167J-101	100	1/6W	CARBON	
	R508	QRD167J-101	100	1/6W	CARBON	

⚠ : SAFETY PARTS

■ ENC-062☐ Digital Surround PC Board Ass'y

Note:ENC-062☐varies according to the areas employed. See note (1) when placing an order.



Note (1)

PC Board Ass'y	Designated Areas
ENC-062🄰	the U. S. A., Canada,
ENC-062🄱	Europe, Australia, Europe(with LW), the U. K. (with LW)
ENC-062🄲	West Germany
ENC-062🄳	Other Countries

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q691	DTC144ES	SILICON	ROHM	
	Q692	DTA114YS	SILICON	ROHM	
	Q693	DTC144ES	SILICON	ROHM	
	Q695	DTC144ES	SILICON	ROHM	
	Q696	DTA114YS	SILICON	ROHM	
	Q697	2SD655(D,E)	SILICON	HITACHI	
	Q698	2SD655(D,E)	SILICON	HITACHI	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC301	VC4580LD	I.C.	JRC	
	IC302	TC9164N	I.C.	TOSHIBA	
	IC303	NJM4560SD	I.C.	JRC	
	IC601	VC4580L	I.C.	JRC	
	IC611	VC4580L	I.C.	JRC	
	IC612	VC4580L	I.C.	JRC	
	IC621	NJM78L05A	I.C.	JRC	
	IC631	YM3428	I.C.	YAMAHA	
	IC632	VC4580L	I.C.	JRC	
	IC633	VC4580L	I.C.	JRC	
	IC651	LC4966	I.C.	SANYO	
	IC660	VC4580L	I.C.	JRC	
	IC661	LA2730	I.C.	SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D621	MTZ5.1JC	ZENER	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C301	QETB1HM-475	4.7MF	50V	ELECTRO	
	C302	QETB1HM-475	4.7MF	50V	ELECTRO	
	C303	QCS21HJ-101	100PF	50V	CERAMIC	
	C304	QCS21HJ-101	100PF	50V	CERAMIC	
	C305	QCY21HK-182	1800PF	50V	CERAMIC	
	C306	QCY21HK-182	1800PF	50V	CERAMIC	
	C307	QCY21HK-682	6800PF	50V	CERAMIC	
	C308	QCY21HK-682	6800PF	50V	CERAMIC	
	C309	QCY21HK-101	100PF	50V	CERAMIC	
	C310	QCY21HK-101	100PF	50V	CERAMIC	
	C311	QETB1HM-475	4.7MF	50V	ELECTRO	
	C312	QETB1HM-475	4.7MF	50V	ELECTRO	
	C313	QETB1AM-107	100MF	10V	ELECTRO	
	C314	QETB1AM-107	100MF	10V	ELECTRO	
	C315	QETB1EM-226	22MF	25V	ELECTRO	
	C316	QETB1EM-226	22MF	25V	ELECTRO	
	C317	QCS21HJ-101	100PF	50V	CERAMIC	
	C318	QCS21HJ-101	100PF	50V	CERAMIC	
	C321	QCF21HP-223	0.022MF	50V	CERAMIC	
	C322	QCF21HP-223	0.022MF	50V	CERAMIC	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C323	QCS21HJ-221	220PF	50V	CERAMIC	
	C324	QCS21HJ-221	220PF	50V	CERAMIC	C
	C325	QCS21HJ-331	330PF	50V	CERAMIC	C
	C326	QCS21HJ-331	330PF	50V	CERAMIC	C
	C327	QCS21HJ-331	330PF	50V	CERAMIC	C
	C328	QCS21HJ-331	330PF	50V	CERAMIC	C
	C329	QCS21HJ-331	330PF	50V	CERAMIC	C
	C330	QCS21HJ-331	330PF	50V	CERAMIC	C
	C331	QCS21HJ-331	330PF	50V	CERAMIC	C
	C332	QCS21HJ-331	330PF	50V	CERAMIC	C
	C333	QCS21HJ-331	330PF	50V	CERAMIC	C
	C334	QCS21HJ-331	330PF	50V	CERAMIC	C
	C371	QETB1EM-106	10MF	25V	ELECTRO	
	C372	QETB1EM-106	10MF	25V	ELECTRO	
	C373	QETB1EM-106	10MF	25V	ELECTRO	
	C374	QETB1EM-106	10MF	25V	ELECTRO	
	C375	QETB1EM-476	47MF	25V	ELECTRO	
	C376	QETB1EM-476	47MF	25V	ELECTRO	
	C377	QCF21HP-223	0.022MF	50V	CERAMIC	
	C378	QCF21HP-223	0.022MF	50V	CERAMIC	
	C600	QETB1EM-106	10MF	25V	ELECTRO	
	C601	QETB1HM-105	1MF	50V	ELECTRO	
	C602	QETB1HM-105	1MF	50V	ELECTRO	
	C604	QCS21HJ-100	10PF	50V	CERAMIC	
	C607	QCF21HP-223	0.022MF	50V	CERAMIC	
	C608	QETB1EM-106	10MF	25V	ELECTRO	
	C609	QCF21HP-223	0.022MF	50V	CERAMIC	
	C610	QETB1EM-106	10MF	25V	ELECTRO	
	C611	QCS21HJ-100	10PF	50V	CERAMIC	
	C612	QETB1HM-475	4.7MF	50V	ELECTRO	
	C613	QCS21HJ-681	680PF	50V	CERAMIC	
	C616	QCS21HJ-271	270PF	50V	CERAMIC	
	C618	QCS21HJ-680	68PF	50V	CERAMIC	
	C620	QCS21HJ-681	680PF	50V	CERAMIC	
	C622	QCS21HJ-271	270PF	50V	CERAMIC	
	C625	QCS21HJ-680	68PF	50V	CERAMIC	
	C627	QFN81HJ-682	6800PF	50V	MYLAR	
	C628	QCZ0205-155	1.5MF	25V	CERAMIC	
	C629	QFV81HJ-684	0.68MF	50V	T.FILM	
	C630	QETB1EM-106	10MF	25V	ELECTRO	
	C631	QCS21HJ-100	10PF	50V	CERAMIC	
	C632	QCS21HJ-100	10PF	50V	CERAMIC	
	C633	QETB1HM-475	4.7MF	50V	ELECTRO	
	C634	QETB1HM-475	4.7MF	50V	ELECTRO	
	C635	QCS21HJ-681	680PF	50V	CERAMIC	
	C636	QCS21HJ-681	680PF	50V	CERAMIC	
	C639	QCS21HJ-271	270PF	50V	CERAMIC	
	C640	QCS21HJ-271	270PF	50V	CERAMIC	
	C643	QCS21HJ-680	68PF	50V	CERAMIC	
	C644	QCS21HJ-680	68PF	50V	CERAMIC	
	C647	QETB1HM-475	4.7MF	50V	ELECTRO	
	C648	QETB1HM-475	4.7MF	50V	ELECTRO	
	C651	QETB1HM-475	4.7MF	50V	ELECTRO	
	C652	QETB1HM-475	4.7MF	50V	ELECTRO	
	C660	QETB1AM-107	100MF	10V	ELECTRO	
	C662	QCS21HJ-681	680PF	50V	CERAMIC	
	C665	QCS21HJ-101	100PF	50V	CERAMIC	
	C666	QCS21HJ-331	330PF	50V	CERAMIC	
	C668	QETB1HM-105	1MF	50V	ELECTRO	
	C669	QEB51HM-334	0.33MF	50V	LLC ELECTR	
	C670	QFN81HK-104	0.1MF	50V	MYLAR	
	C671	QETB1HM-105	1MF	50V	ELECTRO	
	C672	QFN81HK-104	0.1MF	50V	MYLAR	
	C673	QETB1EM-106	10MF	25V	ELECTRO	
	C675	QFN81HJ-472	4700PF	50V	MYLAR	
	C676	QFN81HK-333	0.033MF	50V	MYLAR	
	C677	QETB1CM-226	22MF	16V	ELECTRO	
	C678	QETB1AM-107	100MF	10V	ELECTRO	
	C679	QETB1HM-105	1MF	50V	ELECTRO	
	C680	QETB1HM-106	10MF	50V	ELECTRO	
	C681	QETB1HM-105	1MF	50V	ELECTRO	
	C682	QCS21HJ-100	10PF	50V	CERAMIC	
	C683	QCS21HJ-471	470PF	50V	CERAMIC	
	C684	QETB1HM-105	1MF	50V	ELECTRO	
	C685	QCS21HJ-100	10PF	50V	CERAMIC	
	C686	QETB1HM-105	1MF	50V	ELECTRO	
	C690	QFV81HJ-684	0.68MF	50V	T.FILM	

⚠ : SAFETY PARTS

Note (1)

PC Board Ass'y	Designated Areas
END-054 A	the U. S. A
END-054 B	Canada
END-054 C	Other Countries
END-054 D	Europe, Australia, Europe (with LW)
END-054 EBS	the U. K. (with LW)
END-054 F	West Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	Q821	2SD1265A(O)	SILICON	MATSUSHITA	C
	Q822	2SC2235(O,Y)	SILICON	TOSHIBA	
	Q824	DTC114YS	SILICON	ROHM	
	Q851	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q852	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q853	2SC945A(P,Q)	SILICON	NEC	
	Q854	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q855	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q856	2SB941A(P,Q)	SILICON	MATSUSHITA	
	Q857	2SD1266(P,Q)	SILICON	MATSUSHITA	
	Q981	DTC114YS	SILICON	ROHM	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	IC021	UPC1188H	I.C.	NEC	
	IC022	UPC1188H	I.C.	NEC	
	IC981	TA7317P	I.C.	TOSHIBA	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION		AREA
				MAKER	
	D821	ERA15-02L19	SILICON	KYOUDOU	
	D822	ERA15-02L19	SILICON	KYOUDOU	
	D823	ERA15-02L19	SILICON	KYOUDOU	
	D824	ERA15-02L19	SILICON	KYOUDOU	
	D825	MTZ12JC	ZENER	ROHM	C
	D826	1SS133	SILICON	ROHM	
	D827	RD6.2JSB3	ZENER	NEC	
	D851	30D2FC	SILICON	NIHONINTER	
	D852	30D2FC	SILICON	NIHONINTER	
	D853	30D2FC	SILICON	NIHONINTER	
	D854	30D2FC	SILICON	NIHONINTER	
	D855	UTZ6.8JC	ZENER	ROHM	
	D856	1SS133	SILICON	ROHM	
	D857	MTZ15JC	ZENER	ROHM	
	D858	1SS133	SILICON	ROHM	
	D859	MTZ15JC	ZENER	ROHM	
	D860	1SS133	SILICON	ROHM	
	D861	MTZ13JC	ZENER	ROHM	
	D862	1SS133	SILICON	ROHM	
	D863	1SS133	SILICON	ROHM	
	D864	MTZ15JC	ZENER	ROHM	
	D981	1SS133	SILICON	ROHM	
	D982	1SS133	SILICON	ROHM	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C001	QCZ9019-472	4700PF		CERAMIC	A
	C001	QCZ9019-472	4700PF		CERAMIC	B
	C001	QCZ9019-472	4700PF		CERAMIC	C
	C001	QCZ9019-472	4700PF		CERAMIC	D
	C001	QCZ9019-472	4700PF		CERAMIC	F
	C001	QCZ9019-472BS	4700PF		CERAMIC	EBS
	C021	QETB1HM-475	4.7MF	50V	ELECTRO	
	C022	QETB1HM-475	4.7MF	50V	ELECTRO	
	C023	QCS21HJ-271	270PF	50V	CERAMIC	
	C024	QCS21HJ-271	270PF	50V	CERAMIC	
	C025	QETB1CM-226	22MF	16V	ELECTRO	
	C026	QETB1CM-226	22MF	16V	ELECTRO	
	C027	QCS21HJ-470	47PF	50V	CERAMIC	
	C028	QCS21HJ-470	47PF	50V	CERAMIC	
	C029	QETB1HM-476	47MF	50V	ELECTRO	
	C030	QETB1HM-476	47MF	50V	ELECTRO	
	C031	QFN81HK-223	0.022MF	50V	MYLAR	A
	C031	QFN81HK-223	0.022MF	50V	MYLAR	C
	C031	QFN81HK-473	0.047MF	50V	MYLAR	B
	C031	QFN81HK-473	0.047MF	50V	MYLAR	D
	C031	QFN81HK-473	0.047MF	50V	MYLAR	EBS
	C031	QFN81HK-473	0.047MF	50V	MYLAR	F
	C032	QFN81HK-223	0.022MF	50V	MYLAR	A
	C032	QFN81HK-223	0.022MF	50V	MYLAR	C
	C032	QFN81HK-473	0.047MF	50V	MYLAR	B
	C032	QFN81HK-473	0.047MF	50V	MYLAR	D
	C032	QFN81HK-473	0.047MF	50V	MYLAR	EBS
	C032	QFN81HK-473	0.047MF	50V	MYLAR	F
	C033	QFN81HK-473	0.047MF	50V	MYLAR	B
	C033	QFN81HK-473	0.047MF	50V	MYLAR	D
	C033	QFN81HK-473	0.047MF	50V	MYLAR	EBS
	C033	QFN81HK-473	0.047MF	50V	MYLAR	F
	C034	QFN81HK-473	0.047MF	50V	MYLAR	B
	C034	QFN81HK-473	0.047MF	50V	MYLAR	D
	C034	QFN81HK-473	0.047MF	50V	MYLAR	EBS
	C034	QFN81HK-473	0.047MF	50V	MYLAR	F
	C035	QFN81HK-473	0.047MF	50V	MYLAR	
	C036	QFN81HK-473	0.047MF	50V	MYLAR	
	C821	QFN32AK-473	0.047MF	100V	MYLAR	
	C822	QETB1EM-477	470MF	25V	ELECTRO	A
	C822	QETB1EM-477	470MF	25V	ELECTRO	B
	C822	QETB1EM-477	470MF	25V	ELECTRO	D
	C822	QETB1EM-477	470MF	25V	ELECTRO	EBS
	C822	QETB1EM-477	470MF	25V	ELECTRO	F
	C822	QETB1JM-227	220MF	63V	ELECTRO	C
	C823	QCF21HP-472	4700PF	50V	CERAMIC	C
	C824	QCF21HP-472	4700PF	50V	CERAMIC	
	C825	QETB1CM-476	47MF	16V	ELECTRO	
	C851	QFN32AK-473	0.047MF	100V	MYLAR	
	C852	QCE22HP-103	0.01MF	500V	CERAMIC	
	C853	QFN32AK-103	0.01MF	100V	MYLAR	
	C855	QETB1EM-478	4700MF	25V	ELECTRO	
	C856	QETB1EM-338	3300MF	25V	ELECTRO	
	C857	QCF21HP-472	4700PF	50V	CERAMIC	
	C858	QETB1CM-107	100MF	16V	ELECTRO	
	C859	QCF21HP-472	4700PF	50V	CERAMIC	
	C860	QETB1EM-107	100MF	25V	ELECTRO	
	C861	QCF21HP-472	4700PF	50V	CERAMIC	
	C862	QETB1EM-107	100MF	25V	ELECTRO	
	C863	QCF21HP-472	4700PF	50V	CERAMIC	
	C864	QETB1EM-107	100MF	25V	ELECTRO	
	C865	QCF21HP-472	4700PF	50V	CERAMIC	
	C866	QETB1EM-107	100MF	25V	ELECTRO	
	C981	QCY21HK-102	1000PF	50V	CERAMIC	
	C982	QETB1AM-107	100MF	10V	ELECTRO	
	C983	QETB1CM-226	22MF	16V	ELECTRO	
	C984	QETB1HM-225	2.2MF	50V	ELECTRO	
	C991	QCY21HK-102	1000PF	50V	CERAMIC	F
	C992	QCY21HK-102	1000PF	50V	CERAMIC	F
	C993	QCF21HP-472	4700PF	50V	CERAMIC	F
	C994	QCF21HP-472	4700PF	50V	CERAMIC	F

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R001	QRC128K-275EM	2.7M	1/2W	COMPOSI	A
⚠	R001	QRC128K-275EM	2.7M	1/2W	COMPOSI	B
	R021	QRD167J-222	2.2K	1/6W	CARBON	
	R022	QRD167J-222	2.2K	1/6W	CARBON	
	R023	QRD167J-104	100K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R024	QRD167J-104	100K	1/6W	CARBON	
	R025	QRD167J-104	100K	1/6W	CARBON	
	R026	QRD167J-104	100K	1/6W	CARBON	
	R027	QRD167J-272	2.7K	1/6W	CARBON	
	R028	QRD167J-272	2.7K	1/6W	CARBON	
	R029	QRD167J-104	100K	1/6W	CARBON	
	R030	QRD167J-104	100K	1/6W	CARBON	
⚠	R031	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R032	QRD145J-100S	10	1/4W	UNF.CARBON	
	R033	QRD167J-100	10	1/6W	CARBON	A
	R034	QRD167J-100	10	1/6W	CARBON	A
⚠	R831	QRD145J-100S	10	1/4W	UNF.CARBON	A
⚠	R831	QRD145J-100S	10	1/4W	UNF.CARBON	B
⚠	R831	QRD145J-3R3S	3.3	1/4W	UNF.CARBON	C
⚠	R831	QRZ0062-100	10	1/4W	FUSIBLE	D
⚠	R831	QRZ0062-100	10	1/4W	FUSIBLE	EBS
⚠	R831	QRZ0062-100	10	1/4W	FUSIBLE	F
	R833	QRD167J-821	820	1/6W	CARBON	
⚠	R834	QRD125J-272	2.7K	1/2W	UNF.CARBON	C
⚠	R851	QRD145J-100S	10	1/4W	UNF.CARBON	A
⚠	R851	QRD145J-100S	10	1/4W	UNF.CARBON	B
⚠	R851	QRD145J-100S	10	1/4W	UNF.CARBON	C
⚠	R851	QRZ0062-100	10	1/4W	FUSIBLE	D
⚠	R851	QRZ0062-100	10	1/4W	FUSIBLE	EBS
⚠	R851	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R852	QRD145J-821S	820	1/4W	UNF.CARBON	
⚠	R853	QRD145J-332S	3.3K	1/4W	UNF.CARBON	
⚠	R854	QRD145J-100S	10	1/4W	UNF.CARBON	
⚠	R855	QRD145J-101S	100	1/4W	UNF.CARBON	A
⚠	R855	QRD145J-101S	100	1/4W	UNF.CARBON	B
⚠	R855	QRD145J-101S	100	1/4W	UNF.CARBON	C
⚠	R855	QRZ0062-101	100	1/4W	FUSIBLE	D
⚠	R855	QRZ0062-101	100	1/4W	FUSIBLE	EBS
⚠	R855	QRZ0062-101	100	1/4W	FUSIBLE	F
	R856	QRD167J-392	3.9K	1/6W	CARBON	
⚠	R857	QRD145J-100S	10	1/4W	UNF.CARBON	A
⚠	R857	QRD145J-100S	10	1/4W	UNF.CARBON	B
⚠	R857	QRD145J-100S	10	1/4W	UNF.CARBON	C
⚠	R857	QRZ0062-100	10	1/4W	FUSIBLE	D
⚠	R857	QRZ0062-100	10	1/4W	FUSIBLE	EBS
⚠	R857	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R858	QRD145J-122S	1.2K	1/4W	UNF.CARBON	
⚠	R859	QRD145J-100S	10	1/4W	UNF.CARBON	A
⚠	R859	QRD145J-100S	10	1/4W	UNF.CARBON	B
⚠	R859	QRD145J-100S	10	1/4W	UNF.CARBON	C
⚠	R859	QRZ0062-100	10	1/4W	FUSIBLE	D
⚠	R859	QRZ0062-100	10	1/4W	FUSIBLE	EBS
⚠	R859	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R860	QRD145J-122S	1.2K	1/4W	UNF.CARBON	
⚠	R861	QRD145J-100S	10	1/4W	UNF.CARBON	A
⚠	R861	QRD145J-100S	10	1/4W	UNF.CARBON	B
⚠	R861	QRD145J-100S	10	1/4W	UNF.CARBON	C
⚠	R861	QRZ0062-100	10	1/4W	FUSIBLE	D
⚠	R861	QRZ0062-100	10	1/4W	FUSIBLE	EBS
⚠	R861	QRZ0062-100	10	1/4W	FUSIBLE	F
⚠	R862	QRD145J-122S	1.2K	1/4W	UNF.CARBON	
	R863	QRD167J-272	2.7K	1/6W	CARBON	
	R981	QRD167J-823	82K	1/6W	CARBON	
	R982	QRD167J-104	100K	1/6W	CARBON	
	R983	QRD167J-563	56K	1/6W	CARBON	
	R984	QRD167J-563	56K	1/6W	CARBON	
	R985	QRD167J-683	68K	1/6W	CARBON	
	R986	QRD167J-392	3.9K	1/6W	CARBON	
	R987	QRD167J-224	220K	1/6W	CARBON	
	R988	QRD167J-562	5.6K	1/6W	CARBON	
⚠	R989	QRG012J-121A	120	1W	O.M.FILM	A
⚠	R989	QRG012J-121A	120	1W	O.M.FILM	B
⚠	R989	QRG012J-121A	120	1W	O.M.FILM	C
⚠	R989	QRG012J-390A	39	1W	O.M.FILM	D
⚠	R989	QRG012J-390A	39	1W	O.M.FILM	EBS
⚠	R989	QRG012J-390A	39	1W	O.M.FILM	F
	R990	QRD167J-682	6.8K	1/6W	CARBON	
	R991	QRD167J-682	6.8K	1/6W	CARBON	
	R998	QRD167J-220	22	1/6W	CARBON	A
	R998	QRD167J-220	22	1/6W	CARBON	B
	R998	QRD167J-220	22	1/6W	CARBON	C
⚠	R999	QRG022J-101A	100	2W	O.M.FILM	D
⚠	R999	QRG022J-101A	100	2W	O.M.FILM	EBS
⚠	R999	QRG022J-101A	100	2W	O.M.FILM	F

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMB90YV-401A	SPEAKER TERMINAL	
⚠		ETP1000-41EA	POWER TRANSFORMER	D
⚠		ETP1000-41EA	POWER TRANSFORMER	F
⚠		ETP1000-41EABS	POWER TRANSFORMER	EBS
⚠		ETP1000-41ZB	POWER TRANSFORMER	C
⚠		ETP1000-42JA	POWER TRANSFORMER	A
⚠		ETP1000-42JA	POWER TRANSFORMER	B
		E11896-004	CIRCUIT BOARD	A
		E11896-004	CIRCUIT BOARD	B
		E11896-101	CIRCUIT BOARD	C
		E11896-101	CIRCUIT BOARD	D
		E11896-101	CIRCUIT BOARD	F
		E11896-101BS	CIRCUIT BOARD	EBS
		E65508-002	TAB	
		E67764-102	WRAPPING TERMINAL	
		E67764-102	WRAPPING TERMINAL	
		E67764-103	WRAPPING TERMINAL	C
		E67764-202	WRAPPING TERMINAL	
		E67764-202	WRAPPING TERMINAL	D
		E67764-202	WRAPPING TERMINAL	D
		E67764-202	WRAPPING TERMINAL	EBS
		E67764-202	WRAPPING TERMINAL	EBS
		E67764-202	WRAPPING TERMINAL	F
		E67764-202	WRAPPING TERMINAL	F
		E67764-302	WRAPPING TERMINAL	C
		E70859-001	EARTH PLATE	
		E70945-H25B	HEAT SINK	
		E70945-H25B	HEAT SINK	
		E70945-H40B	HEAT SINK	C
		E73525-003	SCREW	
		E75137-001	HEAT SINK	
⚠		QMC0437-002	AC OUTLET	C
⚠		QMC0440-001	AC OUTLET	A
⚠		QMC0440-001	AC OUTLET	B
		SBSB3008CC	SCREW	
		SBSB3008CC	SCREW	C
		SBSG3008CC	SCREW	
		SBSG3008M	SCREW	
	F001	EMG7331-001	FUSE CLIP	A
	F001	EMG7331-001	FUSE CLIP	B
	F001	EMG7331-001	FUSE CLIP	D
	F001	EMG7331-001	FUSE CLIP	EBS
	F001	EMG7331-001	FUSE CLIP	F
	F002	EMG7331-001	FUSE CLIP	D
	F002	EMG7331-001	FUSE CLIP	EBS
	F002	EMG7331-001	FUSE CLIP	F
	F851	EMG7331-001	FUSE CLIP	
	F852	EMG7331-001	FUSE CLIP	
	L021	EQL0001-R45	INDUCTOR	F
	L022	EQL0001-R45	INDUCTOR	F
	L023	EQL0001-R45	INDUCTOR	A
	L024	EQL0001-R45	INDUCTOR	A
	P851	EMV7112-005	CONNECTOR	
	P852	EMV7112-004	CONNECTOR	
⚠	CP051	ICP-N25	I.C. PROTECTOR	A
⚠	CP052	ICP-N25	I.C. PROTECTOR	A
	FW308	EWR23C-35JN	FLAT WIRE	
	FW804	EWR37B-45KST	FLAT WIRE	
	FW851	EWR35B-16KST	FLAT WIRE	
	FW905	EWR34B-30SST	FLAT WIRE	
	RY001	ESK1D12-115	RELAY	
	RY001	ESK1D12-115	RELAY	A
	RY001	ESK1D12-115	RELAY	B
	RY001	ESK1D12-115	RELAY	C
	RY001	ESK1D12-115	RELAY	D
	RY001	ESK1D12-115	RELAY	F
	RY001	ESK1D12-115BS	RELAY	EBS
	RY981	ESK8D12-211M	RELAY	

⚠ : SAFETY PARTS

Note (1)

PC Board Ass'y	Designated Areas
ENA-068H	the U. S. A., Canada
ENA-068I	Other Countries
ENA-068J	Australia
ENA-068K	Europe
ENA-068L	U. K. (with LW)
ENA-068M	Europe (with LW)
ENA-068N	West Germany

Transistors

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	J
	Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	K
	Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	L
	Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	M
	Q101	2SK606(Q,R)	F.E.T	MATSUSHITA	N
	Q101	2SK606(Q,R,S)	F.E.T		H
	Q101	2SK606(Q,R,S)	F.E.T		I
	Q102	2SC535(B,C)	SILICON	HITACHI	
	Q103	2SC461(C)	SILICON	HITACHI	
	Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	J
	Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	K
	Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	L
	Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	M
	Q104	2SK606(Q,R)	F.E.T	MATSUSHITA	N
	Q104	2SK606(Q,R,S)	F.E.T		H
	Q104	2SK606(Q,R,S)	F.E.T		I
	Q105	2SK606(Q,R)	F.E.T	MATSUSHITA	N
	Q121	2SC461(B,C)	SILICON	HITACHI	
	Q122	2SC535(B,C)	SILICON	HITACHI	
	Q123	2SC461(B,C)	SILICON	HITACHI	
	Q171	DTC114YS	SILICON	ROHM	
	Q201	2SK301(Q,R)	F.E.T	MATSUSHITA	
	Q221	2SK301(Q,R)	F.E.T	MATSUSHITA	L
	Q221	2SK301(Q,R)	F.E.T	MATSUSHITA	M
	Q222	2SK301(P,Q)	F.E.T	MATSUSHITA	L
	Q222	2SK301(P,Q)	F.E.T	MATSUSHITA	M
	Q223	2SK301(P,Q)	F.E.T	MATSUSHITA	L
	Q223	2SK301(P,Q)	F.E.T	MATSUSHITA	M
	Q224	2SD1302(S,T)	SILICON	MATSUSHITA	L
	Q224	2SD1302(S,T)	SILICON	MATSUSHITA	M
	Q251	2SA564A(R,S)	SILICON	MATSUSHITA	
	Q252	2SA564A(R,S)	SILICON	MATSUSHITA	
	Q253	2SA564A(R,S)	SILICON	MATSUSHITA	L
	Q253	2SA564A(R,S)	SILICON	MATSUSHITA	M
	Q261	2SK301(Q1)	F.E.T	MATSUSHITA	
	Q262	2SC458(D)	SILICON	HITACHI	

⚠ : SAFETY PARTS

I.C.s

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	IC101	LA1266A	I.C.	SANYO	
	IC171	LA3401	I.C.	SANYO	
	IC251	LC7217	I.C.	SANYO	

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D101	1SS108	SILICON	HITACHI	H
	D101	1SS108	SILICON	HITACHI	I
	D101	1SS108	SILICON	HITACHI	J
	D101	1SS108	SILICON	HITACHI	K
	D101	1SS108	SILICON	HITACHI	L

⚠ : SAFETY PARTS

Diodes

⚠	ITEM	PART NUMBER	DESCRIPTION	MAKER	AREA
	D101	1SS108	SILICON	HITACHI	M
	D171	1SS119	SILICON	HITACHI	
	D172	1SS119	SILICON	HITACHI	
	D173	1SS119	SILICON	HITACHI	
	D174	1SS119	SILICON	HITACHI	
	D221	1SS119	SILICON	HITACHI	L
	D221	1SS119	SILICON	HITACHI	M
	D222	1SS119	SILICON	HITACHI	L
	D222	1SS119	SILICON	HITACHI	M
	D223	1SS119	SILICON	HITACHI	L
	D223	1SS119	SILICON	HITACHI	M
	D224	1SS119	SILICON	HITACHI	L
	D224	1SS119	SILICON	HITACHI	M
	VC101	SVC202(AB)	VARICAP	SANYO	
	VC102	SVC202(AB)	VARICAP	SANYO	
	VC103	SVC202(AB)	VARICAP	SANYO	
	VC201	KV1236Z	VARICAP	TOKO	
	VC202	KV1236Z	VARICAP	TOKO	
	VC221	KV1236Z	VARICAP	TOKO	L
	VC221	KV1236Z	VARICAP	TOKO	M
	VC222	KV1236Z	VARICAP	TOKO	L
	VC222	KV1236Z	VARICAP	TOKO	M

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C101	QCS21HJ-3R0	3PF	50V	CERAMIC	N
	C102	QCF21HP-102	1000PF	50V	CERAMIC	
	C103	QCS21HJ-5R0	5PF	50V	CERAMIC	
	C104	QCS21HJ-2R0	2PF	50V	CERAMIC	
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	H
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	I
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	J
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	K
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	L
	C105	QCS21HJ-2R0	2PF	50V	CERAMIC	M
	C106	QCS21HJ-151	150PF	50V	CERAMIC	
	C107	QCF21HP-103	0.01MF	50V	CERAMIC	
	C108	QCT26TH-100	10PF	50V	CERAMIC	
	C109	QCT26CH-7R0	7PF	50V	CERAMIC	
	C110	QCT26CH-220	22PF	50V	CERAMIC	
	C111	QCF21HP-103	0.01MF	50V	CERAMIC	
	C112	QCT26CH-100	10PF	50V	CERAMIC	
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	H
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	I
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	J
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	K
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	L
	C113	QCS21HJ-2R0	2PF	50V	CERAMIC	M
	C113	QCS21HJ-4R0	4PF	50V	CERAMIC	N
	C114	QCT26CH-2R0	2PF	50V	CERAMIC	
	C116	QCS21HJ-4R0	4PF	50V	CERAMIC	N
	C117	QCC21EM-473	0.047MF	25V	CERAMIC	
	C118	QCF21HP-103	0.01MF	50V	CERAMIC	
	C120	QETB1EM-226	22MF	25V	ELECTRO	
	C121	QCS21HJ-220	22PF	50V	CERAMIC	
	C122	QCF21HP-223	0.022MF	50V	CERAMIC	
	C123	QCF21HP-223	0.022MF	50V	CERAMIC	
	C131	QCS21HJ-101	100PF	50V	CERAMIC	
	C141	QCF21HP-223	0.022MF	50V	CERAMIC	
	C142	QCC21EM-223	0.022MF	25V	CERAMIC	
	C143	QCF21HP-223	0.022MF	50V	CERAMIC	
	C144	QETB1HM-105	1MF	50V	ELECTRO	
	C145	QCS21HJ-101	100PF	50V	CERAMIC	J
	C145	QCS21HJ-101	100PF	50V	CERAMIC	K
	C145	QCS21HJ-101	100PF	50V	CERAMIC	L
	C145	QCS21HJ-101	100PF	50V	CERAMIC	M
	C145	QCS21HJ-101	100PF	50V	CERAMIC	N
	C145	QCS21HJ-221	220PF	50V	CERAMIC	H
	C145	QCS21HJ-221	220PF	50V	CERAMIC	I
	C146	QCF21HP-223	0.022MF	50V	CERAMIC	
	C147	QETB1HM-225	2.2MF	50V	ELECTRO	
	C148	QFN81HK-332	3300PF	50V	MYLAR	
	C149	QETB1HM-225	2.2MF	50V	ELECTRO	
	C150	QETB1HM-475	4.7MF	50V	ELECTRO	
	C151	QCF21HP-223	0.022MF	50V	CERAMIC	
	C152	QETB1EM-106	10MF	25V	ELECTRO	
	C153	QCF21HP-223	0.022MF	50V	CERAMIC	
	C154	QCF21HP-223	0.022MF	50V	CERAMIC	
	C155	QCF21HP-223	0.022MF	50V	CERAMIC	
	C156	QETB1EM-106	10MF	25V	ELECTRO	

⚠ : SAFETY PARTS

Capacitors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	C157	QCY21HK-102	1000PF	50V	CERAMIC	
	C158	QETB1EM-226	22MF	25V	ELECTRO	
	C159	QETB1HM-475	4.7MF	50V	ELECTRO	
	C160	QCS21HJ-101	100PF	50V	CERAMIC	
	C161	QCS21HJ-101	100PF	50V	CERAMIC	
	C162	QCC21EM-223	0.022MF	25V	CERAMIC	
	C163	QCF21HP-223	0.022MF	50V	CERAMIC	
	C171	QFN81HK-223	0.022MF	50V	MYLAR	J
	C171	QFN81HK-223	0.022MF	50V	MYLAR	K
	C171	QFN81HK-223	0.022MF	50V	MYLAR	L
	C171	QFN81HK-223	0.022MF	50V	MYLAR	M
	C171	QFN81HK-223	0.022MF	50V	MYLAR	N
	C171	QFN81HK-333	0.033MF	50V	MYLAR	H
	C171	QFN81HK-333	0.033MF	50V	MYLAR	I
	C172	QETB1EM-106	10MF	25V	ELECTRO	
	C173	QFN81HK-473	0.047MF	50V	MYLAR	
	C174	QETB1EM-106	10MF	25V	ELECTRO	
	C175	QCS21HJ-271	270PF	50V	CERAMIC	J
	C175	QCS21HJ-271	270PF	50V	CERAMIC	K
	C175	QCS21HJ-271	270PF	50V	CERAMIC	L
	C175	QCS21HJ-271	270PF	50V	CERAMIC	M
	C175	QCS21HJ-271	270PF	50V	CERAMIC	N
	C175	QCS21HJ-561	560PF	50V	CERAMIC	H
	C175	QCS21HJ-561	560PF	50V	CERAMIC	I
	C176	QCS21HJ-271	270PF	50V	CERAMIC	J
	C176	QCS21HJ-271	270PF	50V	CERAMIC	K
	C176	QCS21HJ-271	270PF	50V	CERAMIC	L
	C176	QCS21HJ-271	270PF	50V	CERAMIC	M
	C176	QCS21HJ-271	270PF	50V	CERAMIC	N
	C176	QCS21HJ-561	560PF	50V	CERAMIC	H
	C176	QCS21HJ-561	560PF	50V	CERAMIC	I
	C177	QETB1HM-225	2.2MF	50V	ELECTRO	
	C178	QETB1HM-225	2.2MF	50V	ELECTRO	
	C179	QETB1HM-225	2.2MF	50V	ELECTRO	
	C180	QETB1HM-105	1MF	50V	ELECTRO	
	C181	QETB1HM-105	1MF	50V	ELECTRO	
	C182	QETB1HM-474	0.47MF	50V	ELECTRO	
	C183	QETB1HM-225	2.2MF	50V	ELECTRO	
	C184	QCY21HK-102	1000PF	50V	CERAMIC	
	C191	QETB1EM-226	22MF	25V	ELECTRO	
	C202	QCC21EM-223	0.022MF	25V	CERAMIC	
	C203	QCS21HJ-561	560PF	50V	CERAMIC	
	C204	QETB1EM-226	22MF	25V	ELECTRO	
	C205	QCT26CH-100	10PF	50V	CERAMIC	
	C206	QCT26CH-100	10PF	50V	CERAMIC	
	C207	QCT26CH-221	220PF	50V	CERAMIC	
	C208	QCT26CH-271	270PF	50V	CERAMIC	
	C221	QCS21HJ-330	33PF	50V	CERAMIC	L
	C221	QCS21HJ-330	33PF	50V	CERAMIC	M
	C222	QCC21EM-473	0.047MF	25V	CERAMIC	L
	C222	QCC21EM-473	0.047MF	25V	CERAMIC	M
	C223	QCF21HP-103	0.01MF	50V	CERAMIC	L
	C223	QCF21HP-103	0.01MF	50V	CERAMIC	M
	C224	QETB1EM-226	22MF	25V	ELECTRO	L
	C224	QETB1EM-226	22MF	25V	ELECTRO	M
	C225	QCT26CH-680	68PF	50V	CERAMIC	L
	C225	QCT26CH-680	68PF	50V	CERAMIC	M
	C226	QCT26CH-7R0	7PF	50V	CERAMIC	L
	C226	QCT26CH-7R0	7PF	50V	CERAMIC	M
	C227	QCT26CH-150	15PF	50V	CERAMIC	L
	C227	QCT26CH-150	15PF	50V	CERAMIC	M
	C228	QCT26CH-151	150PF	50V	CERAMIC	L
	C228	QCT26CH-151	150PF	50V	CERAMIC	M
	C251	QCS21HJ-180	18PF	50V	CERAMIC	
	C252	QCS21HJ-180	18PF	50V	CERAMIC	
	C253	QCC21EM-473	0.047MF	25V	CERAMIC	
	C254	QCF21HP-103	0.01MF	50V	CERAMIC	
	C261	QEN51HM-474	0.47MF	50V	NON POLE	
	C262	QCY21HK-102	1000PF	50V	CERAMIC	
	C263	QCF21HP-223	0.022MF	50V	CERAMIC	
	TC101	ENZ1003-003			TRIMMER	
	TC102	ENZ1003-003			TRIMMER	
	TC201	ENZ1003-006			TRIMMER	
	TC221	ENZ1003-006			TRIMMER	L
	TC221	ENZ1003-006			TRIMMER	M

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R101	QRD167J-473	47K	1/6W	CARBON	
	R102	QRD167J-330	33	1/6W	CARBON	
	R103	QRD167J-221	220	1/6W	CARBON	
	R104	QRD167J-473	47K	1/6W	CARBON	
	R105	QRD167J-332	3.3K	1/6W	CARBON	

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R106	QRD167J-223	22K	1/6W	CARBON	
	R107	QRD167J-102	1K	1/6W	CARBON	
	R108	QRD167J-102	1K	1/6W	CARBON	
	R109	QRD167J-562	5.6K	1/6W	CARBON	
	R110	QRD167J-561	560	1/6W	CARBON	
	R111	QRD167J-103	10K	1/6W	CARBON	
	R112	QRD167J-682	6.8K	1/6W	CARBON	
	R113	QRD167J-222	2.2K	1/6W	CARBON	
	R114	QRD167J-224	220K	1/6W	CARBON	
	R115	QRD167J-331	330	1/6W	CARBON	
	R116	QRD167J-224	220K	1/6W	CARBON	N
	R117	QRD167J-331	330	1/6W	CARBON	N
	R120	QRD167J-330	33	1/6W	CARBON	
	R121	QRD167J-332	3.3K	1/6W	CARBON	
	R122	QRD167J-221	220	1/6W	CARBON	
	R123	QRD167J-272	2.7K	1/6W	CARBON	
	R124	QRD167J-391	390	1/6W	CARBON	
	R125	QRD167J-102	1K	1/6W	CARBON	
	R126	QRD167J-681	680	1/6W	CARBON	
	R127	QRD167J-332	3.3K	1/6W	CARBON	
	R128	QRD167J-221	220	1/6W	CARBON	
	R141	QRD167J-822	8.2K	1/6W	CARBON	
	R142	QRD167J-102	1K	1/6W	CARBON	
	R143	QRD167J-183	18K	1/6W	CARBON	H
	R143	QRD167J-333	33K	1/6W	CARBON	I
	R143	QRD167J-333	33K	1/6W	CARBON	J
	R143	QRD167J-333	33K	1/6W	CARBON	K
	R143	QRD167J-333	33K	1/6W	CARBON	L
	R143	QRD167J-333	33K	1/6W	CARBON	M
	R143	QRD167J-333	33K	1/6W	CARBON	N
	R144	QRD167J-561	560	1/6W	CARBON	
	R145	QRD167J-103	10K	1/6W	CARBON	H
	R145	QRD167J-103	10K	1/6W	CARBON	I
	R145	QRD167J-333	33K	1/6W	CARBON	J
	R145	QRD167J-333	33K	1/6W	CARBON	K
	R145	QRD167J-333	33K	1/6W	CARBON	L
	R145	QRD167J-333	33K	1/6W	CARBON	M
	R145	QRD167J-333	33K	1/6W	CARBON	N
	R146	QRD167J-221	220	1/6W	CARBON	
	R147	QRD167J-103	10K	1/6W	CARBON	
	R148	QRD167J-223	22K	1/6W	CARBON	
	R149	QRD167J-473	47K	1/6W	CARBON	
	R150	QRD167J-103	10K	1/6W	CARBON	
	R151	QRD167J-334	330K	1/6W	CARBON	
	R171	QRD167J-393	39K	1/6W	CARBON	H
	R171	QRD167J-393	39K	1/6W	CARBON	I
	R172	QRD167J-134	130K	1/6W	CARBON	H
	R172	QRD167J-134	130K	1/6W	CARBON	I
	R172	QRD167J-184	180K	1/6W	CARBON	J
	R172	QRD167J-184	180K	1/6W	CARBON	K
	R172	QRD167J-184	180K	1/6W	CARBON	L
	R172	QRD167J-184	180K	1/6W	CARBON	M
	R172	QRD167J-184	180K	1/6W	CARBON	N
	R173	QRD167J-134	130K	1/6W	CARBON	H
	R173	QRD167J-134	130K	1/6W	CARBON	I
	R173	QRD167J-184	180K	1/6W	CARBON	J
	R173	QRD167J-184	180K	1/6W	CARBON	K
	R173	QRD167J-184	180K	1/6W	CARBON	L
	R173	QRD167J-184	180K	1/6W	CARBON	M
	R173	QRD167J-184	180K	1/6W	CARBON	N
	R174	QRD167J-332	3.3K	1/6W	CARBON	
	R175	QRD167J-332	3.3K	1/6W	CARBON	
	R176	QRD167J-184	180K	1/6W	CARBON	H
	R176	QRD167J-184	180K	1/6W	CARBON	I
	R176	QRD167J-274	270K	1/6W	CARBON	J
	R176	QRD167J-274	270K	1/6W	CARBON	K
	R176	QRD167J-274	270K	1/6W	CARBON	L
	R176	QRD167J-274	270K	1/6W	CARBON	M
	R176	QRD167J-274	270K	1/6W	CARBON	N
	R177	QRD167J-184	180K	1/6W	CARBON	H
	R177	QRD167J-184	180K	1/6W	CARBON	I
	R177	QRD167J-274	270K	1/6W	CARBON	J
	R177	QRD167J-274	270K	1/6W	CARBON	K
	R177	QRD167J-274	270K	1/6W	CARBON	L
	R177	QRD167J-274	270K	1/6W	CARBON	M
	R177	QRD167J-274	270K	1/6W	CARBON	N
	R178	QRD167J-682	6.8K	1/6W	CARBON	
	R179	QRD167J-682	6.8K	1/6W	CARBON	
	R180	QRD167J-103	10K	1/6W	CARBON	
	R181	QRD167J-103	10K	1/6W	CARBON	
	R182	QRD167J-103	10K	1/6W	CARBON	
	R183	QRD167J-103	10K	1/6W	CARBON	
	R184	QRD167J-562	5.6K	1/6W	CARBON	
	R185	QRD167J-562	5.6K	1/6W	CARBON	
⚠	R191	QRD14CJ-680S	68	1/4W	UNF.CARBON	H
⚠	R191	QRD14CJ-680S	68	1/4W	UNF.CARBON	I
⚠	R191	QRZ0077-680	68	1/4W	FUSIBLE	J
⚠	R191	QRZ0077-680	68	1/4W	FUSIBLE	K
⚠	R191	QRZ0077-680	68	1/4W	FUSIBLE	L
⚠	R191	QRZ0077-680	68	1/4W	FUSIBLE	M

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
	R301	QRD167J-222	2.2K	1/6W	CARBON	
	R302	QRD167J-222	2.2K	1/6W	CARBON	
	R303	QRD167J-473	47K	1/6W	CARBON	
	R304	QRD167J-473	47K	1/6W	CARBON	
	R305	QRD167J-511	510	1/6W	CARBON	
	R306	QRD167J-511	510	1/6W	CARBON	
	R307	QRD167J-393	39K	1/6W	CARBON	
	R308	QRD167J-393	39K	1/6W	CARBON	
	R309	QRD167J-474	470K	1/6W	CARBON	
	R310	QRD167J-474	470K	1/6W	CARBON	
	R311	QRD167J-104	100K	1/6W	CARBON	
	R312	QRD167J-104	100K	1/6W	CARBON	
⚠	R313	QRD145J-271S	270	1/4W	UNF.CARBON	
⚠	R314	QRD145J-271S	270	1/4W	UNF.CARBON	
⚠	R315	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R315	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R315	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R315	QRZ0062-680	68	1/4W	FUSIBLE	C
⚠	R316	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R316	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R316	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R316	QRZ0062-680	68	1/4W	FUSIBLE	C
	R321	QRD167J-221	220	1/6W	CARBON	
	R322	QRD167J-221	220	1/6W	CARBON	
	R323	QRD167J-221	220	1/6W	CARBON	A
	R323	QRD167J-221	220	1/6W	CARBON	B
	R323	QRD167J-221	220	1/6W	CARBON	D
	R323	QRD167J-222	2.2K	1/6W	CARBON	C
	R324	QRD167J-221	220	1/6W	CARBON	A
	R324	QRD167J-221	220	1/6W	CARBON	B
	R324	QRD167J-221	220	1/6W	CARBON	D
	R324	QRD167J-222	2.2K	1/6W	CARBON	C
	R325	QRD167J-221	220	1/6W	CARBON	
	R326	QRD167J-221	220	1/6W	CARBON	
	R327	QRD167J-221	220	1/6W	CARBON	A
	R327	QRD167J-221	220	1/6W	CARBON	B
	R327	QRD167J-221	220	1/6W	CARBON	D
	R327	QRD167J-222	2.2K	1/6W	CARBON	C
	R328	QRD167J-221	220	1/6W	CARBON	A
	R328	QRD167J-221	220	1/6W	CARBON	B
	R328	QRD167J-221	220	1/6W	CARBON	D
	R328	QRD167J-222	2.2K	1/6W	CARBON	C
	R329	QRD167J-221	220	1/6W	CARBON	
	R330	QRD167J-221	220	1/6W	CARBON	
	R371	QRD167J-104	100K	1/6W	CARBON	
	R372	QRD167J-104	100K	1/6W	CARBON	
	R373	QRD167J-104	100K	1/6W	CARBON	
	R374	QRD167J-104	100K	1/6W	CARBON	
⚠	R600	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R600	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R600	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R600	QRZ0062-680	68	1/4W	FUSIBLE	C
	R601	QRD167J-105	1M	1/6W	CARBON	
	R602	QRD167J-104	100K	1/6W	CARBON	
	R604	QRD167J-104	100K	1/6W	CARBON	
	R605	QRD167J-273	27K	1/6W	CARBON	
	R606	QRD167J-273	27K	1/6W	CARBON	
⚠	R610	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R610	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R610	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R610	QRZ0062-680	68	1/4W	FUSIBLE	C
	R611	QRD167J-103	10K	1/6W	CARBON	
	R612	QRD167J-224	220K	1/6W	CARBON	
	R613	QRD167J-103	10K	1/6W	CARBON	
	R614	QRD167J-105	1M	1/6W	CARBON	
	R615	QRD167J-103	10K	1/6W	CARBON	
	R616	QRD167J-104	100K	1/6W	CARBON	
	R617	QRD167J-104	100K	1/6W	CARBON	
	R618	QRD167J-103	10K	1/6W	CARBON	
	R619	QRD167J-104	100K	1/6W	CARBON	
	R620	QRD167J-104	100K	1/6W	CARBON	
	R621	QRD167J-104	100K	1/6W	CARBON	
	R622	QRD167J-223	22K	1/6W	CARBON	
	R623	QRD167J-105	1M	1/6W	CARBON	
	R625	QRD167J-224	220K	1/6W	CARBON	
	R626	QRD167J-224	220K	1/6W	CARBON	
⚠	R630	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R630	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R630	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R630	QRZ0062-680	68	1/4W	FUSIBLE	C
	R631	QRD167J-103	10K	1/6W	CARBON	
	R632	QRD167J-103	10K	1/6W	CARBON	
	R633	QRD167J-104	100K	1/6W	CARBON	
	R634	QRD167J-104	100K	1/6W	CARBON	
	R635	QRD167J-104	100K	1/6W	CARBON	
	R636	QRD167J-104	100K	1/6W	CARBON	
	R637	QRD167J-103	10K	1/6W	CARBON	
	R638	QRD167J-103	10K	1/6W	CARBON	
⚠	R640	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R640	QRD145J-680S	68	1/4W	UNF.CARBON	D

⚠ : SAFETY PARTS

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R640	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R640	QRZ0062-680	68	1/4W	FUSIBLE	C
	R641	QRD167J-153	15K	1/6W	CARBON	
	R642	QRD167J-153	15K	1/6W	CARBON	
	R643	QRD167J-103	10K	1/6W	CARBON	
	R644	QRD167J-103	10K	1/6W	CARBON	
	R651	QRD167J-153	15K	1/6W	CARBON	
	R652	QRD167J-153	15K	1/6W	CARBON	
⚠	R660	QRD145J-680S	68	1/4W	UNF.CARBON	A
⚠	R660	QRD145J-680S	68	1/4W	UNF.CARBON	D
⚠	R660	QRZ0062-680	68	1/4W	FUSIBLE	B
⚠	R660	QRZ0062-680	68	1/4W	FUSIBLE	C
	R662	QRD167J-103	10K	1/6W	CARBON	
	R663	QRD167J-104	100K	1/6W	CARBON	
	R664	QRD167J-104	100K	1/6W	CARBON	
	R665	QRD167J-274	270K	1/6W	CARBON	
	R666	QRD167J-622	6.2K	1/6W	CARBON	
	R667	QRD167J-473	47K	1/6W	CARBON	
	R668	QRD167J-332	3.3K	1/6W	CARBON	
	R669	QRD167J-181	180	1/6W	CARBON	
	R670	QRD167J-103	10K	1/6W	CARBON	
	R671	QRD167J-153	15K	1/6W	CARBON	
	R672	QRD167J-104	100K	1/6W	CARBON	
	R673	QRD167J-102	1K	1/6W	CARBON	
	R674	QRD167J-333	33K	1/6W	CARBON	
	R675	QRD167J-223	22K	1/6W	CARBON	
	R676	QRD167J-683	68K	1/6W	CARBON	
	R677	QRD167J-223	22K	1/6W	CARBON	
	R678	QRD167J-274	270K	1/6W	CARBON	
	R681	QRD167J-393	39K	1/6W	CARBON	
	R682	QRD167J-153	15K	1/6W	CARBON	
	R691	QRD167J-563	56K	1/6W	CARBON	
	R692	QRD167J-563	56K	1/6W	CARBON	
	R693	QRD167J-474	470K	1/6W	CARBON	
	R697	QRD167J-103	10K	1/6W	CARBON	
	R698	QRD167J-103	10K	1/6W	CARBON	

⚠ : SAFETY PARTS

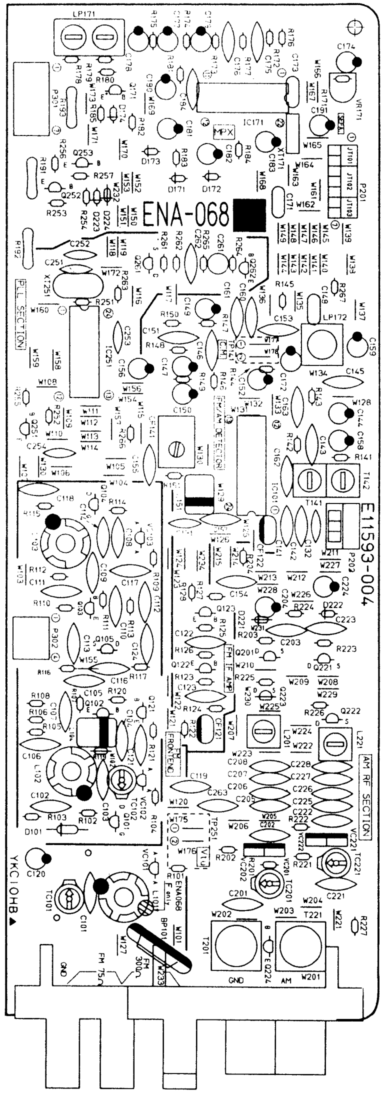
Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		E11897-003	CIRCUIT BOARD	
	J301	EMN00TV-405A	4P PIN JACK	
	J302	EMN00TV-402A	4P PIN JACK	
	J303	EMN00TV-402A	4P PIN JACK	
	PA303	EMV7125-016R	CONNECTOR	
	PA309	EMV7125-007R	CONNECTOR	
	PA310	EMV7125-009R	CONNECTOR	
	XT631	ECX0003-580KM	RESONATOR	

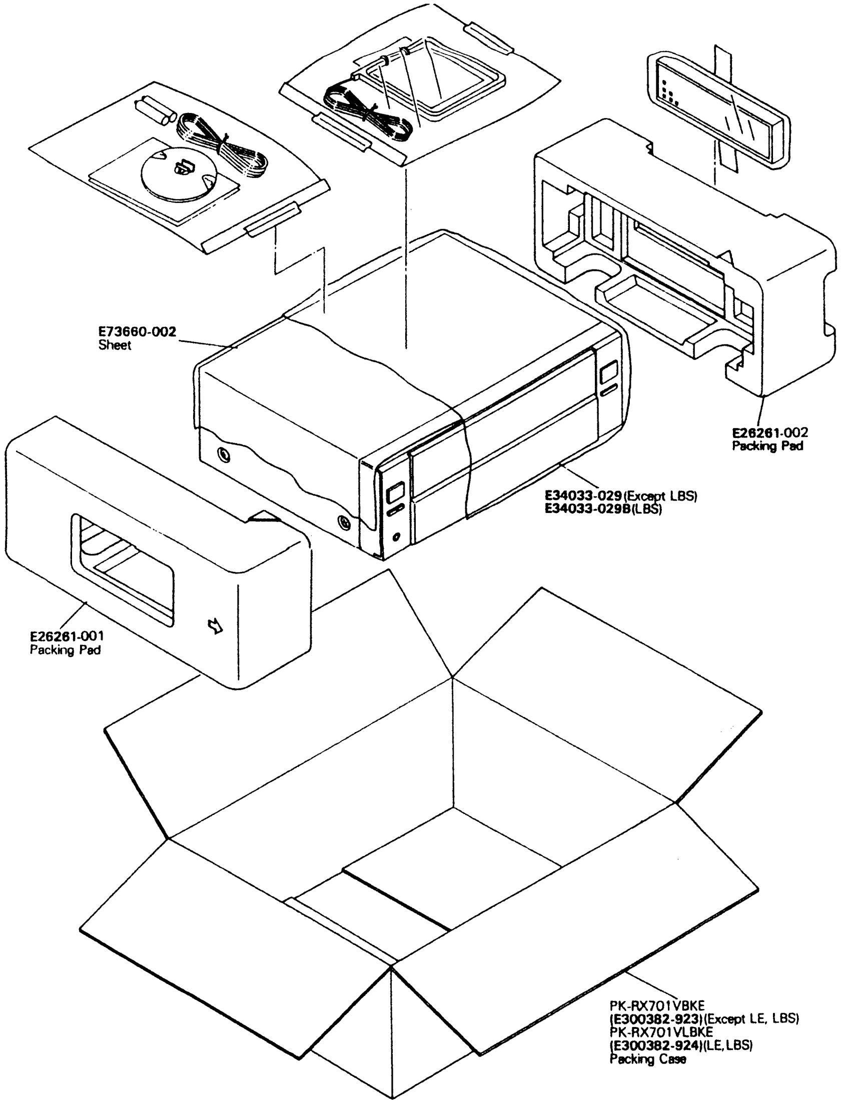
⚠ : SAFETY PARTS

■ ENA-068☐ Tuner PC Board Ass'y

Note:ENA-068☐ varies according to the areas employed. See note (1) when placing an order.



Packing Materials and Part Numbers


E73660-002
Sheet
E26261-002
Packing Pad
E34033-029(Except LBS)
E34033-029B(LBS)
E26261-001
Packing Pad
PK-RX701VBKE
(E300382-923)(Except LE, LBS)
PK-RX701VLBKE
(E300382-924)(LE,LBS)
Packing Case

The Marks for Designated Areas.

J	the U.S.A	A	Australia
C	Canada	LE	Europe (with LW)
U	Other Countries	LBS	the U.K (with LW)
E	Europe	No mark indicates all areas.	
G	West Germany		

Resistors

⚠	ITEM	PART NUMBER	DESCRIPTION			AREA
⚠	R191	QRZ0077-680	68	1/4W	FUSIBLE	N
⚠	R192	QRD14CJ-680S	68	1/4W	UNF.CARBON	H
⚠	R192	QRD14CJ-680S	68	1/4W	UNF.CARBON	I
⚠	R192	QRZ0077-680	68	1/4W	FUSIBLE	J
⚠	R192	QRZ0077-680	68	1/4W	FUSIBLE	K
⚠	R192	QRZ0077-680	68	1/4W	FUSIBLE	L
⚠	R192	QRZ0077-680	68	1/4W	FUSIBLE	M
⚠	R192	QRZ0077-680	68	1/4W	FUSIBLE	N
⚠	R193	QRD14CJ-680S	68	1/4W	UNF.CARBON	H
⚠	R193	QRD14CJ-680S	68	1/4W	UNF.CARBON	I
⚠	R193	QRZ0077-680	68	1/4W	FUSIBLE	J
⚠	R193	QRZ0077-680	68	1/4W	FUSIBLE	K
⚠	R193	QRZ0077-680	68	1/4W	FUSIBLE	L
⚠	R193	QRZ0077-680	68	1/4W	FUSIBLE	M
⚠	R193	QRZ0077-680	68	1/4W	FUSIBLE	N
	R201	QRD167J-103	10K	1/6W	CARBON	
	R202	QRD167J-473	47K	1/6W	CARBON	
	R203	QRD167J-331	330	1/6W	CARBON	
	R204	QRD167J-330	33	1/6W	CARBON	
	R221	QRD167J-103	10K	1/6W	CARBON	L
	R221	QRD167J-103	10K	1/6W	CARBON	M
	R222	QRD167J-473	47K	1/6W	CARBON	L
	R222	QRD167J-473	47K	1/6W	CARBON	M
	R223	QRD167J-331	330	1/6W	CARBON	L
	R223	QRD167J-331	330	1/6W	CARBON	M
	R224	QRD167J-103	10K	1/6W	CARBON	L
	R224	QRD167J-103	10K	1/6W	CARBON	M
	R225	QRD167J-103	10K	1/6W	CARBON	L
	R225	QRD167J-103	10K	1/6W	CARBON	M
	R226	QRD167J-103	10K	1/6W	CARBON	L
	R226	QRD167J-103	10K	1/6W	CARBON	M
	R227	QRD167J-472	4.7K	1/6W	CARBON	L
	R227	QRD167J-472	4.7K	1/6W	CARBON	M
	R251	QRD167J-473	47K	1/6W	CARBON	
	R252	QRD167J-103	10K	1/6W	CARBON	
	R253	QRD167J-103	10K	1/6W	CARBON	
	R254	QRD167J-103	10K	1/6W	CARBON	L
	R254	QRD167J-103	10K	1/6W	CARBON	M
	R255	QRD167J-473	47K	1/6W	CARBON	
	R256	QRD167J-473	47K	1/6W	CARBON	
	R257	QRD167J-473	47K	1/6W	CARBON	L
	R257	QRD167J-473	47K	1/6W	CARBON	M
	R261	QRD167J-222	2.2K	1/6W	CARBON	
	R262	QRD167J-271	270	1/6W	CARBON	
	R263	QRD167J-103	10K	1/6W	CARBON	H
	R263	QRD167J-103	10K	1/6W	CARBON	I
	R263	QRD167J-103	10K	1/6W	CARBON	J
	R263	QRD167J-103	10K	1/6W	CARBON	K
	R263	QRD167J-103	10K	1/6W	CARBON	N
	R263	QRD167J-222	2.2K	1/6W	CARBON	L
	R263	QRD167J-222	2.2K	1/6W	CARBON	M
	R264	QRD167J-472	4.7K	1/6W	CARBON	
	R265	QRD167J-332	3.3K	1/6W	CARBON	H
	R265	QRD167J-332	3.3K	1/6W	CARBON	I
	R265	QRD167J-332	3.3K	1/6W	CARBON	J
	R265	QRD167J-332	3.3K	1/6W	CARBON	K
	R265	QRD167J-332	3.3K	1/6W	CARBON	N
	R265	QRD167J-822	8.2K	1/6W	CARBON	L
	R265	QRD167J-822	8.2K	1/6W	CARBON	M
	R266	QRD167J-222	2.2K	1/6W	CARBON	
	R267	QRD167J-154	150K	1/6W	CARBON	
	VR171	QVZ3518-104	100K	0.1W	VARIABLE	J
	VR171	QVZ3518-104	100K	0.1W	VARIABLE	K
	VR171	QVZ3518-104	100K	0.1W	VARIABLE	L
	VR171	QVZ3518-104	100K	0.1W	VARIABLE	M
	VR171	QVZ3518-104	100K	0.1W	VARIABLE	N

⚠ : SAFETY PARTS

Others

⚠	ITEM	PART NUMBER	DESCRIPTION	AREA
		EMB41YV-301K	ANTENNA TERMINAL	
		EMB41YV-501K	ANTENNA TERMINAL	H
		EMB41YV-501K	ANTENNA TERMINAL	I
		EMB41YV-501K	ANTENNA TERMINAL	J
		EMB41YV-501K	ANTENNA TERMINAL	K
		EMB41YV-501K	ANTENNA TERMINAL	L
		E11593-004(S)	CIRCUIT BOARD	
		E304645-001	SHIELD CASE	H
		E304645-001	SHIELD CASE	I
		E304645-001	SHIELD CASE	J
		E304645-001	SHIELD CASE	K
		E304645-001	SHIELD CASE	L
		E304645-001	SHIELD CASE	M
		E304645-002	SHIELD CASE	N
		E74134-001	SHIELD CASE	N
	L101	EQR2306-014	FM RF COIL	H
	L101	EQR2306-014	FM RF COIL	I
	L101	EQR2306-014	FM RF COIL	J
	L101	EQR2306-014	FM RF COIL	K
	L101	EQR2306-014	FM RF COIL	L
	L101	EQR2306-014	FM RF COIL	M
	L101	EQR2306-016	FM RF COIL	N
	L102	EQR2106-014	RF COIL	
	L103	EQR2406-004	FM OSC COIL	
	L104	EQL3001-1R5K	INDUCTOR	
	L105	EQL3001-1R5K	INDUCTOR	N
	L151	EQL3001-102K	INDUCTOR	
	L201	EQR1207-009	MW OSC COIL	
	L221	EQR1307-002	LW OSC COIL	L
	L221	EQR1307-002	LW OSC COIL	M
	P201	EMV7112-007	CONNECTOR	
	P301	EMV7125-007R	CONNECTOR	
	P302	EMV7125-004R	CONNECTOR	
	T141	EQT2140-012	I.F. TRANSFORMER	
	T142	EQT2140-013	I.F. TRANSFORMER	
	T201	EQR1111-006	AM RF COIL	
	T221	EQR1111-005	AM RF COIL	L
	T221	EQR1111-005	AM RF COIL	M
	BP101	EQF0201-006	BAND PASS FILTER	N
	CF121	ECB2118-001R	CERAMIC FILTER	J
	CF121	ECB2118-001R	CERAMIC FILTER	K
	CF121	ECB2118-001R	CERAMIC FILTER	L
	CF121	ECB2118-001R	CERAMIC FILTER	M
	CF121	ECB2118-001R	CERAMIC FILTER	N
	CF121	ECB2123-001R	CERAMIC FILTER	H
	CF121	ECB2123-001R	CERAMIC FILTER	I
	CF122	ECB2118-001R	CERAMIC FILTER	J
	CF122	ECB2118-001R	CERAMIC FILTER	K
	CF122	ECB2118-001R	CERAMIC FILTER	L
	CF122	ECB2118-001R	CERAMIC FILTER	M
	CF122	ECB2118-001R	CERAMIC FILTER	N
	CF122	ECB2123-001R	CERAMIC FILTER	H
	CF122	ECB2123-001R	CERAMIC FILTER	I
	CF141	ECB1560-006	CERAMIC FILTER	
	LP171	EQF0101-002	LOW PASS FILTER	
	LP172	EQF0102-001	LOW PASS FILTER	N
	XT171	ECX0000-456KR	RESONATOR	
	XT251	ECX0007-200KC	RESONATOR	

⚠ : SAFETY PARTS

Accessories List

⚠	Part Number	Part Name	Q'ty	Description	Areas
	E30580-1493A	Instruction Book	1		J
	E30580-1494A	Instruction Book	1		ExceptJ , LBS
	E30580-1494ABS	Instruction Book	1		LBS
	BT20025K	Warranty Card	1		C
	BT20029C	Warranty Card	1	for Australia	A
	BT20064A	Warranty Card	1		G
	BT20060	Warranty Card	1		LBS
	BT20098	Warranty Card	1	for New Zealand	A
	BT20048C	Warranty Card	1		J , P , PG
	BT20044F	Safety Instruction Sheet	1		J
	BT20066A	EEC Agency	1		G , LBS
	BT20071A	Service Center List	1		C
	BT20108	Service Information	1		J , P , PG
	E43486-340A	Safety Sheet	1		LBS
	E43486-371A	Sheet	1		LBS
	QZL1008-001	FTZ Information Sheet	1		G
	EQB4001-012	AM Loop Antenna	1		
	E304084-001	Loop Stand	1		
	EWP502-005K	Built in Antenna	1		Except G
	EMZ2001-007	Adapter	1		LE
⚠	EMC0202-001BS	AC Plug	1		LBS
	E67007-001	Wire Antenna Ass'y	1		G
⚠	E04056	Siemens Plug	1		U , PG
	E67142-T5R0	Fuse Label	1		U , PG
	E67142-T2R5	Fuse Label	1		P
⚠	QMF51E2-5R0J1	Fuse	1		U , PG
⚠	QMF51E2-2R5J1	Fuse	1		P
	UM-3(DJ)-2PSA	Battery	1		
	E6581-4	Envelope	1	for Fuse	U , P , PG
	E66416-003	Envelope	1		J
	E41202-2	Envelope	2		Except LBS
	E41202-2B	Envelope	2		LBS.
	E35497-015	Caution Sheet	1	220V	U , PG
	E35497-013	Caution Sheet	1	110V	P
	RM-SR701U	Remote Controler	1		

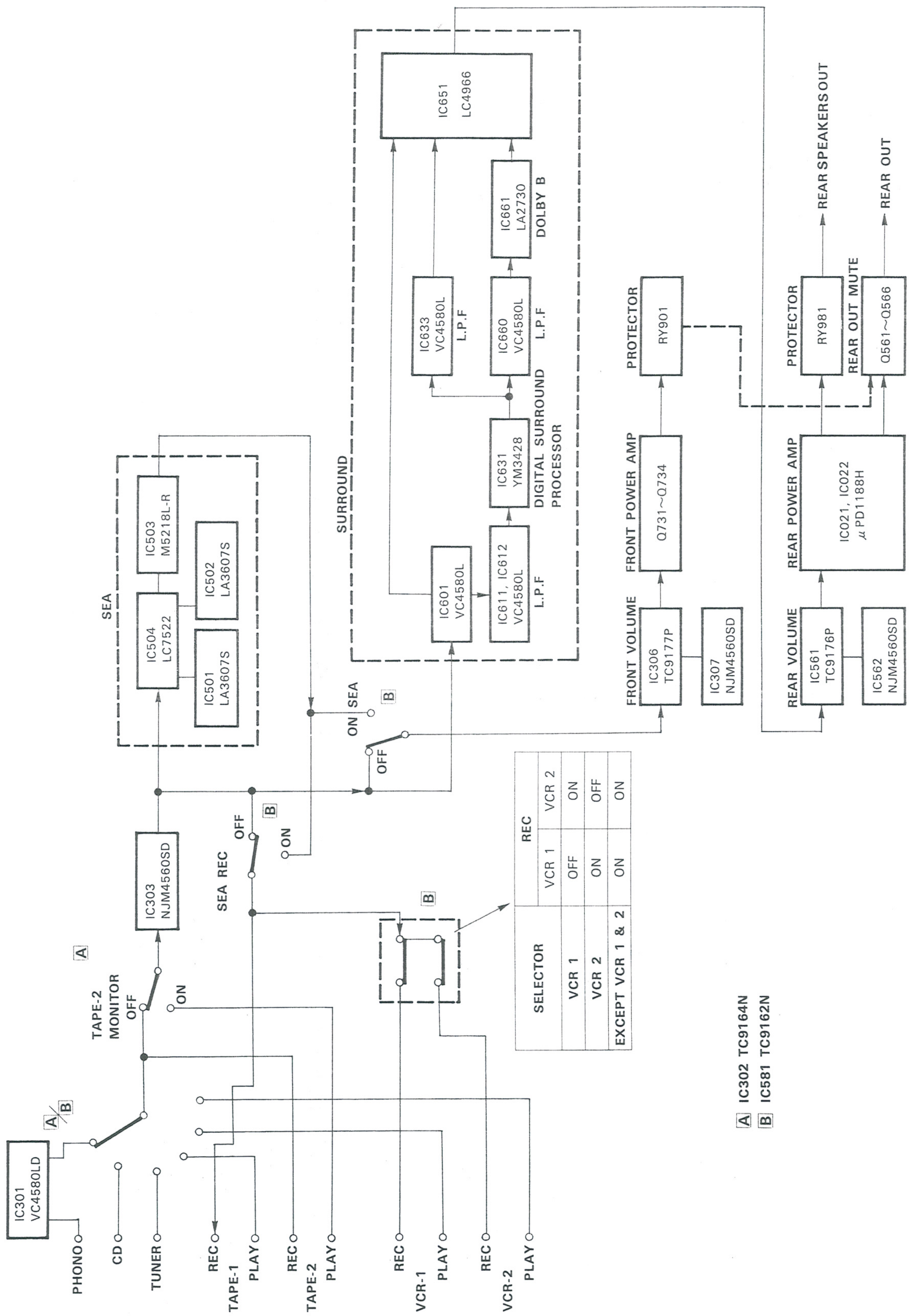
⚠: Safety Parts

The Marks for Designated Areas.

J··································the U.S.A
C··································Canada
U··································Other Countries
P,PG······························U.S.Military Market
E··································Europe
G··································West Germany
A··································Australia
LE································Europe (with LW)
LBS······························the U.K (with LW)
No mark indicates all areas.

Block Diagrams

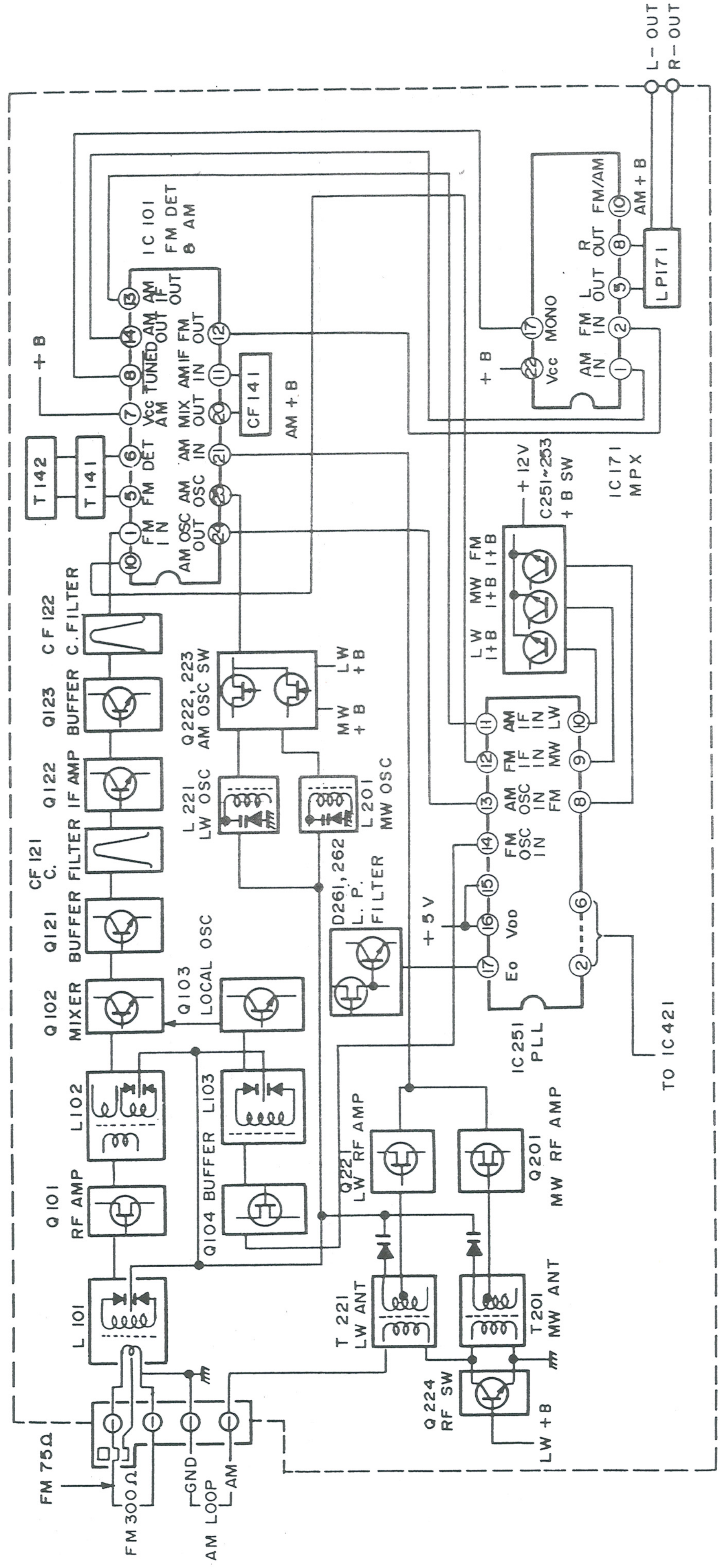
■ Control and Amplifier Section


PHONO
CD
TUNER
REC TAPE-1 PLAY
REC TAPE-2 PLAY
REC VCR-1 PLAY
REC VCR-2 PLAY
IC301 VC4580LD
A/B
TAPE-2 MONITOR
OFF
ON
A
IC303 NJM4560SD
SEA REC
OFF
ON
B
SEA
IC504 LC7522
IC501 LA3607S
IC502 LA3607S
IC503 M5218L-R
ON SEA
OFF
B
SURROUND
IC601 VC4580L
IC611, IC612 VC4580L L.P.F
IC631 YM3428
DIGITAL SURROUND PROCESSOR
IC633 VC4580L L.P.F
IC660 VC4580L L.P.F
IC661 LA2730
DOLBY B
IC651 LC4966
FRONT VOLUME
IC306 TC9177P
IC307 NJM4560SD
FRONT POWER AMP
Q731~Q734
PROTECTOR
RY901
REAR VOLUME
IC561 TC9176P
IC562 NJM4560SD
REAR POWER AMP
IC021, IC022 μPD1188H
PROTECTOR
RY981
REAR OUT MUTE
Q561~Q566
REAR SPEAKERS OUT
REAR OUT
B

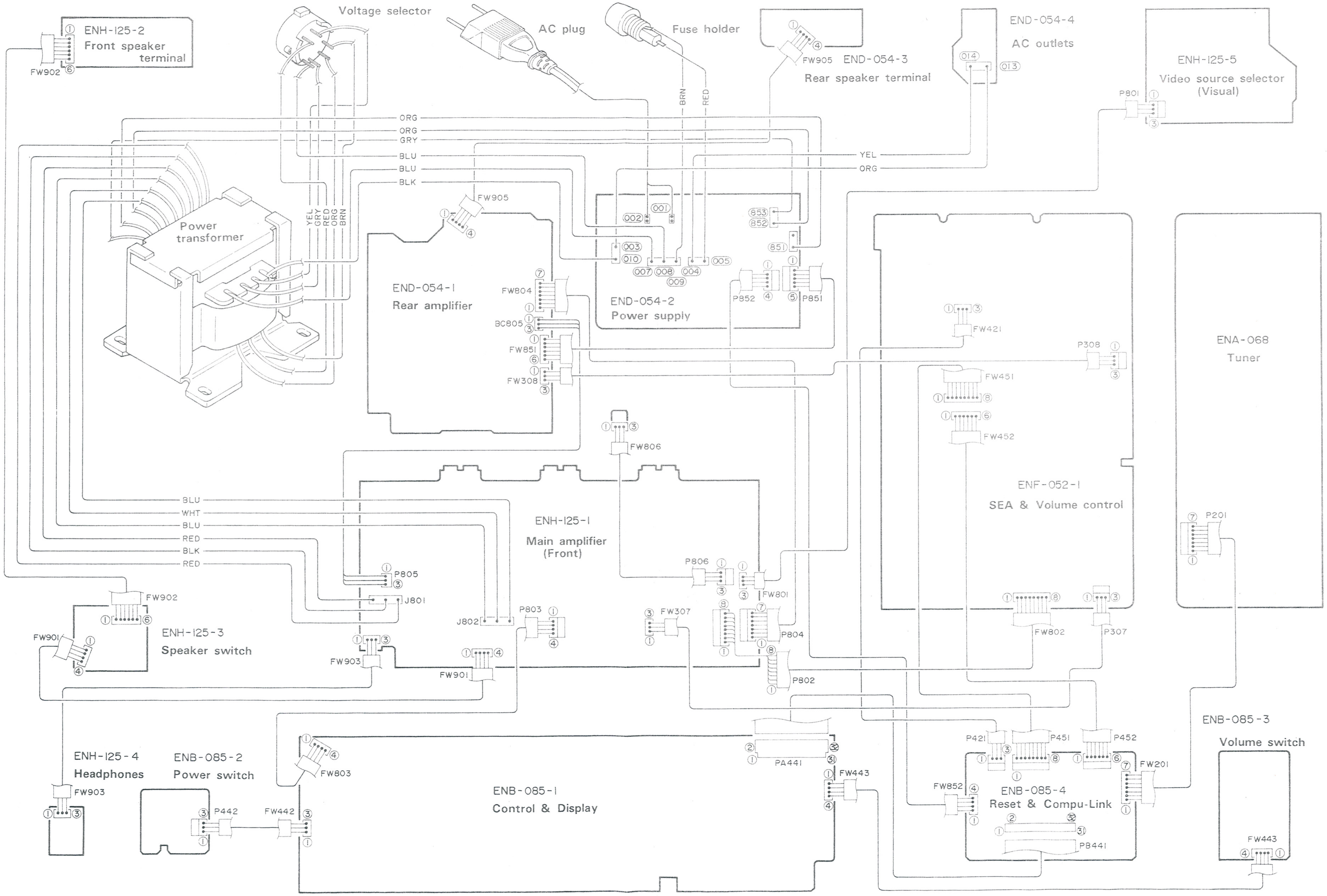
SELECTOR	REC VCR 1	REC VCR 2
VCR 1	OFF	ON
VCR 2	ON	OFF
EXCEPT VCR 1 & 2	ON	ON

A IC302 TC9164N
B IC581 TC9162N

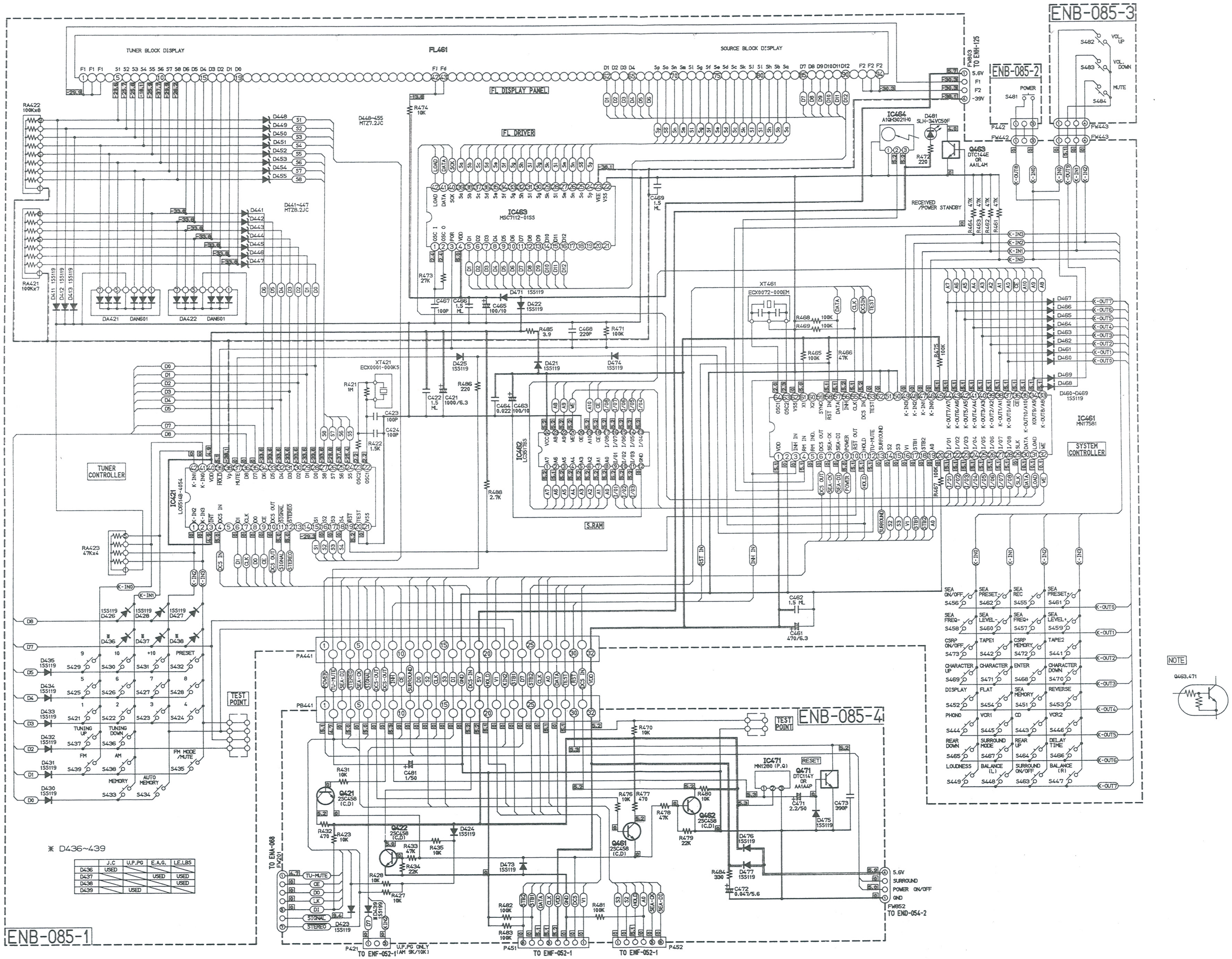
■ Tuner Section


L-OUT
R-OUT
FM 75Ω
FM 300Ω
GND
AM LOOP
AM
L 101
Q101 RF AMP
L102
Q102 MIXER
Q121 BUFFER
CF121 C. FILTER
Q122 IF AMP
Q123 BUFFER
CF122 C. FILTER
Q104 BUFFER
L103
Q103 LOCAL OSC
T221 LW ANT
T201 MW ANT
Q224 RF SW
LW +B
Q221 LW RF AMP
Q201 MW RF AMP
D261, 262 L.P. FILTER
L221 LW OSC
L201 MW OSC
Q222, 223 AM OSC SW
MW +B
LW +B
T142
T141
CF141
AM +B
+B
IC101 FM DET & AM
FM IN
FM DET
Vcc
TUNED
AM OUT
AM IF OUT
FM OUT
AM IF IN
MIX OUT
AM IN
AM OSC OUT
AM OSC
IC171 MPX
AM IN
FM IN
L OUT
R OUT
FM/AM
MONO
Vcc
+B
AM+B
LP171
IC251 PLL
AM IF IN LW
FM IF IN MW
AM OSC IN FM
FM OSC IN
VDD
Eo
+5V
LW I+B
MW I+B
FM I+B
Q251~253 +B SW
+12V
TO IC421

Connection Diagrams


ENH-125-2
Front speaker terminal
FW902
Voltage selector
AC plug
Fuse holder
END-054-3
Rear speaker terminal
FW905
END-054-4
AC outlets
014
013
ENH-125-5
Video source selector (Visual)
P801
ORG
ORG
GRY
BLU
BLU
BLK
BRN
RED
YEL
ORG
Power transformer
YEL
GRY
RED
ORG
BRN
FW905
END-054-1
Rear amplifier
FW804
BC805
FW851
FW308
001
002
003
010
007
008
009
004
005
853
852
851
END-054-2
Power supply
P852
P851
FW421
P308
FW451
FW452
ENA-068
Tuner
FW806
ENF-052-1
SEA & Volume control
P201
BLU
WHT
BLU
RED
BLK
RED
ENH-125-1
Main amplifier (Front)
P805
J801
J802
P803
P806
FW801
FW307
P804
P802
FW802
P307
FW902
ENH-125-3
Speaker switch
FW901
FW903
FW901
ENH-125-4
Headphones
FW903
ENB-085-2
Power switch
P442
FW442
FW803
ENB-085-1
Control & Display
PA441
FW443
P421
P451
P452
FW201
FW852
ENB-085-4
Reset & Compu-Link
P8441
ENB-085-3
Volume switch
FW443

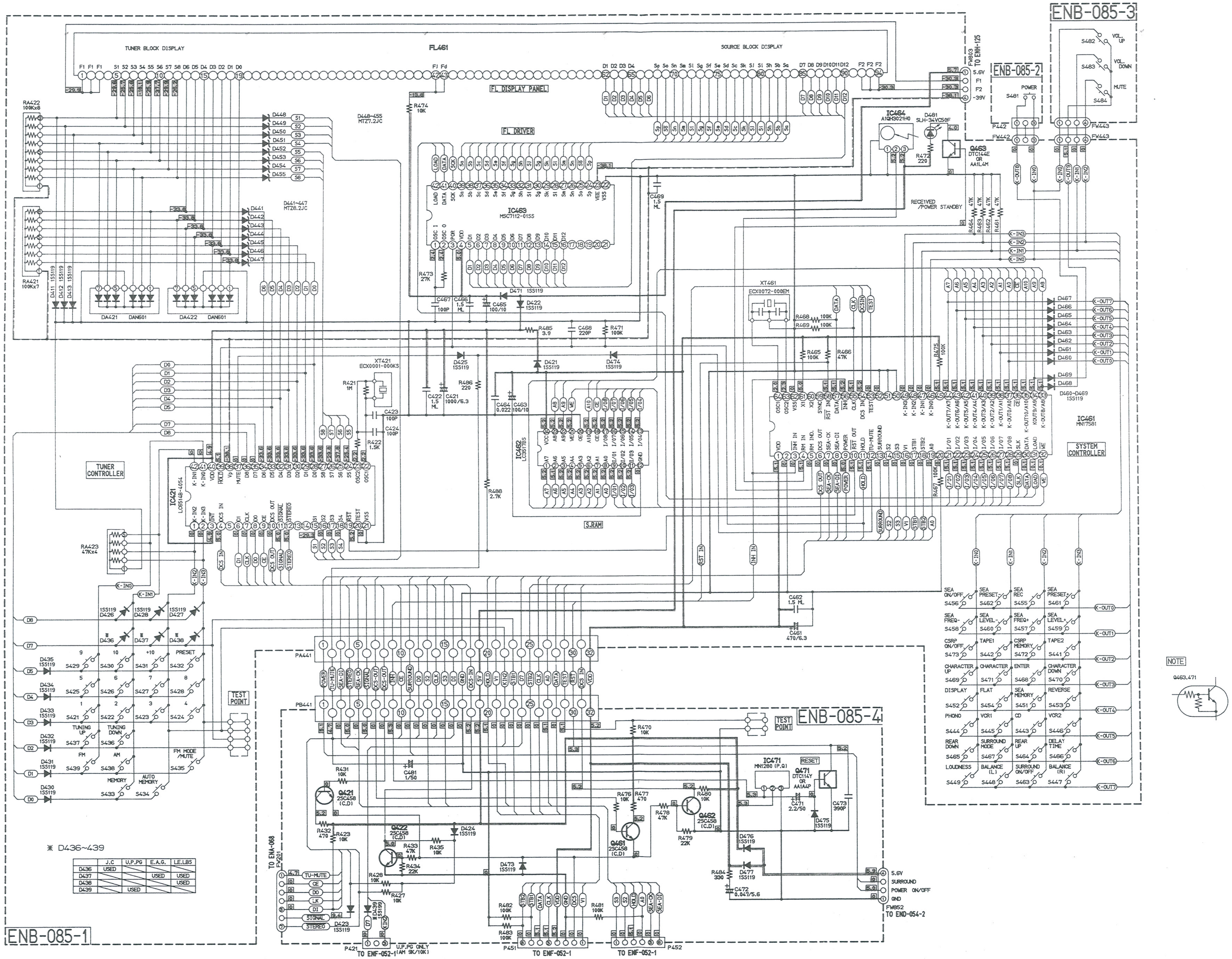
■ F.L. Control & Front Switch Section


FL461
TUNER BLOCK DISPLAY
SOURCE BLOCK DISPLAY
FL DISPLAY PANEL
FL DRIVER
IC463
MSC7112-01SS
IC462
S.RAM
IC461
MN17581
SYSTEM CONTROLLER
IC421
TUNER CONTROLLER
IC464
A1QH3021H0
D481
SLH-34VC50F
Q463
DTC144E
OR
AA1L4M
RECEIVED
/POWER STANDBY
FW803
TO ENH-125
5.6V
F1
F2
-39V
ENB-085-1
ENB-085-2
ENB-085-3
ENB-085-4
POWER
S481
P442
FW442
S482
VOL. UP
S483
VOL. DOWN
S484
MUTE
FW443
XT421
ECX0001-000KS
XT461
ECX0072-000EM
RA422
100Kx8
RA421
100Kx7
RA423
47Kx4
D448~455
MTZ7.2JC
D441~447
MTZ8.2JC
DA421
DAN601
DA422
D460~D469
1SS119
K-IN0
K-IN1
K-IN2
K-IN3
K-OUT0
K-OUT1
K-OUT2
K-OUT3
K-OUT4
K-OUT5
K-OUT6
K-OUT7
SEA ON/OFF S456
SEA PRESET- S462
SEA REC S455
SEA PRESET+ S461
SEA FREQ- S458
SEA LEVEL- S460
SEA FREQ+ S457
SEA LEVEL+ S459
CSRP ON/OFF S473
TAPE1 S442
CSRP MEMORY S472
TAPE2 S441
CHARACTER UP S469
CHARACTER S471
ENTER S468
CHARACTER DOWN S470
DISPLAY S452
FLAT S454
SEA MEMORY S451
REVERSE S453
PHONO S444
VCR1 S445
CD S443
VCR2 S446
REAR DOWN S465
SURROUND MODE S467
REAR UP S464
DELAY TIME S466
LOUDNESS S449
BALANCE (L) S448
SURROUND ON/OFF S463
BALANCE (R) S447
9 S429
10 S430
+10 S431
PRESET S432
5 S425
6 S426
7 S427
8 S428
1 S421
2 S422
3 S423
4 S424
TUNING UP S437
TUNING DOWN S436
FM S439
AM S438
FM MODE /MUTE S435
MEMORY S433
AUTO MEMORY S434
TEST POINT
PA441
PB441
IC471
MN1280 (P.Q)
RESET
Q471
DTC114Y
OR
AA1A4P
Q421
2SC458
(C.D)
Q422
2SC458
(C.D)
Q461
2SC458
(C.D)
Q462
2SC458
(C.D)
TO ENA-068
FW201
TU-MUTE
CE
DO
LK
DI
SIGNAL
STEREO
P421
TO ENF-052-1
U.P.PG ONLY
(AM 9K/10K)
P451
TO ENF-052-1
P452
TO ENF-052-1
5.6V
SURROUND
POWER ON/OFF
GND
FW852
TO END-054-2
NOTE
Q463,471

※ D436~439

	J.C	U.P.PG	E.A.G.	LE.LBS
D436	USED			
D437			USED	USED
D438				USED
D439		USED		

■ F.L. Control & Front Switch Section

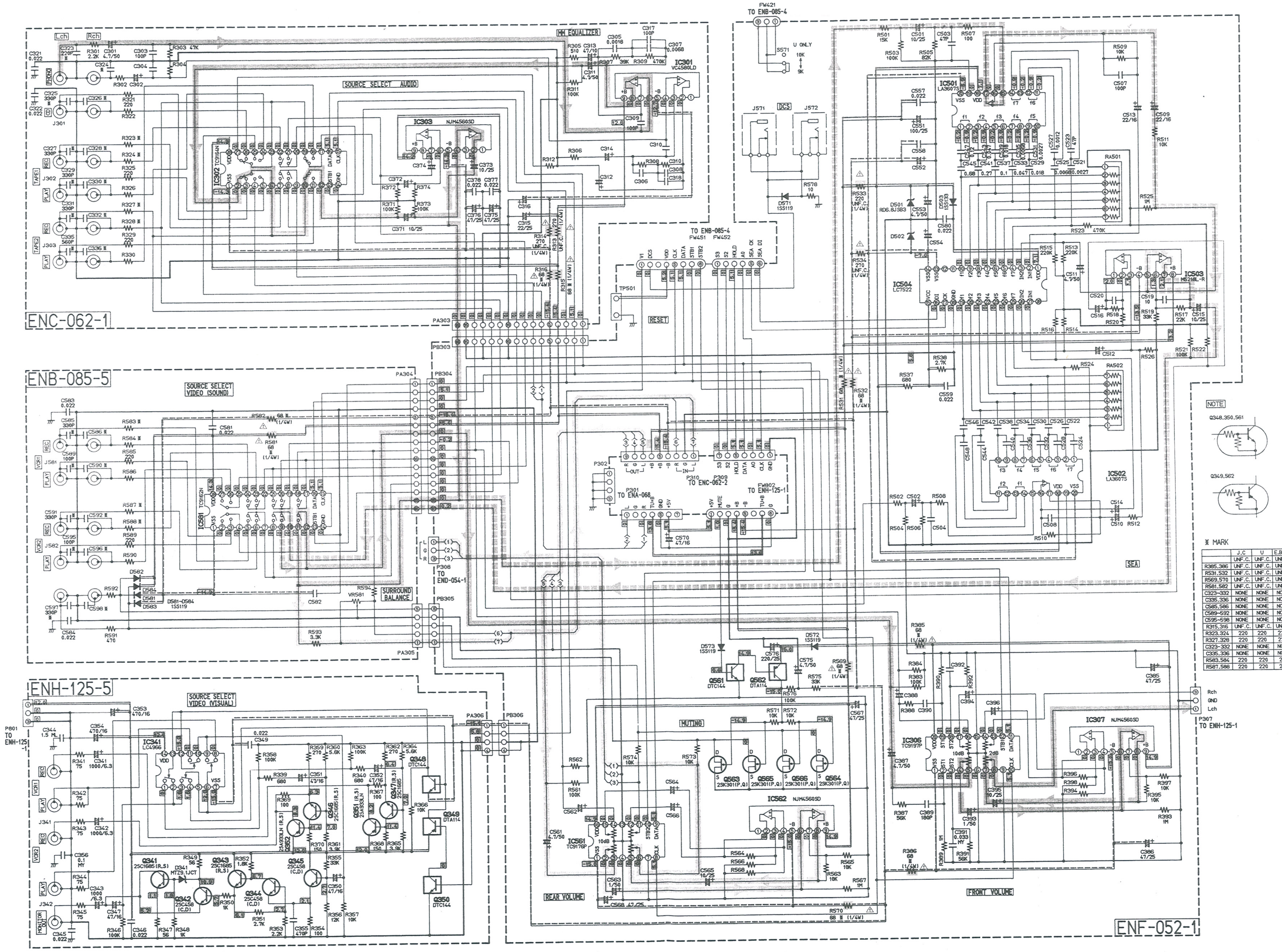


ENB-085-1
ENB-085-2
ENB-085-3
ENB-085-4
FL461
TUNER BLOCK DISPLAY
SOURCE BLOCK DISPLAY
FL DISPLAY PANEL
FL DRIVER
IC463 MSC7112-01SS
IC464 A1GM3021H0
IC461 MN17581
SYSTEM CONTROLLER
IC421 LC6514B-4054
TUNER CONTROLLER
IC462 LC3517BS
S-RAM
IC471 MN1280 (P,Q)
RESET
TEST POINT
PA441
PB441
FW803 TO ENH-125
FW852 TO END-054-2
TO ENA-068 FV201
P421 TO ENF-052-1
P451 TO ENF-052-1
P452 TO ENF-052-1
U.P.PG ONLY (AM 9K/10K)
NOTE
Q463,471
VOL UP
VOL DOWN
MUTE
POWER
RECEIVED /POWER STANDBY
5.6V
SURROUND
POWER ON/OFF
GND

* D436~439

	J.C	U.P.PG	E.A.G.	LE.LBS
D436	USED			
D437			USED	USED
D438				USED
D439		USED		

■ Source Select & S.E.A. Control Section.

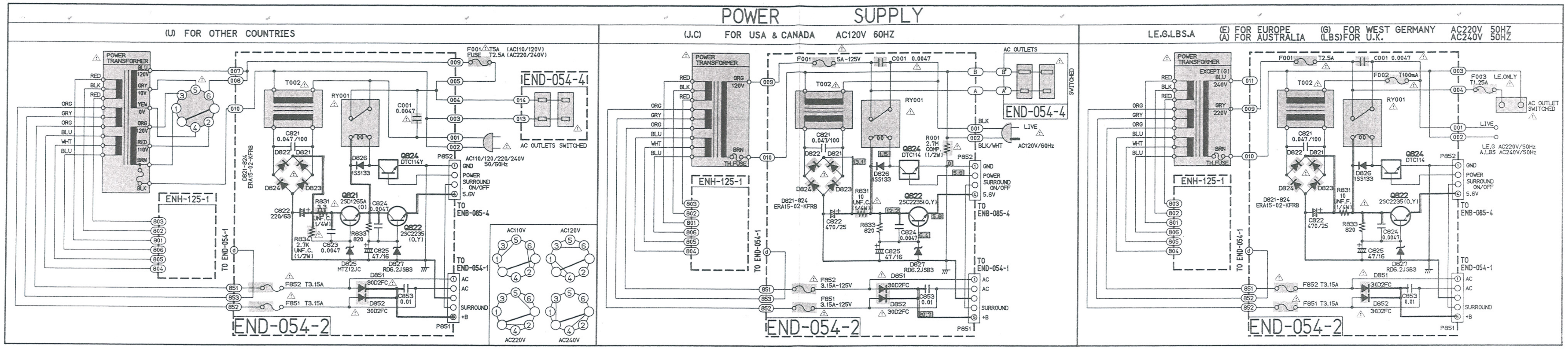

HM EQUALIZER
SOURCE SELECT AUDIO
IC301 VC4560LD
IC302 TC9164N
IC303 NJM4560SD
ENC-062-1
PA303
PB303
FW421 TO ENB-085-4
U ONLY
DCS
J571
J572
TO ENB-085-4 FW451 FW452
TP501
RESET
IC501 LA3607S
IC502 LA3607S
IC503 M5218L-R
IC504 LC7522
RA501
RA502
SEA
ENB-085-5
SOURCE SELECT VIDEO (SOUND)
IC581 TC9162N
SURROUND BALANCE
VR581
PA304
PB304
P308 TO END-054-1
PB305
PA305
P302
P301 TO ENA-068
P310 TO ENC-062-2
P309 FW802 TO ENH-125-1
ENH-125-5
SOURCE SELECT VIDEO (VISUAL)
IC341 LC4966
P801 TO ENH-125-1
PA306
PB306
MUTING
IC561 TC9176P
IC562 NJM4560SD
IC306 TC9197P
IC307 NJM4560SD
REAR VOLUME
FRONT VOLUME
ENF-052-1
P307 TO ENH-125-1
Rch
GND
Lch
NOTE
Q348,350,561
Q349,562

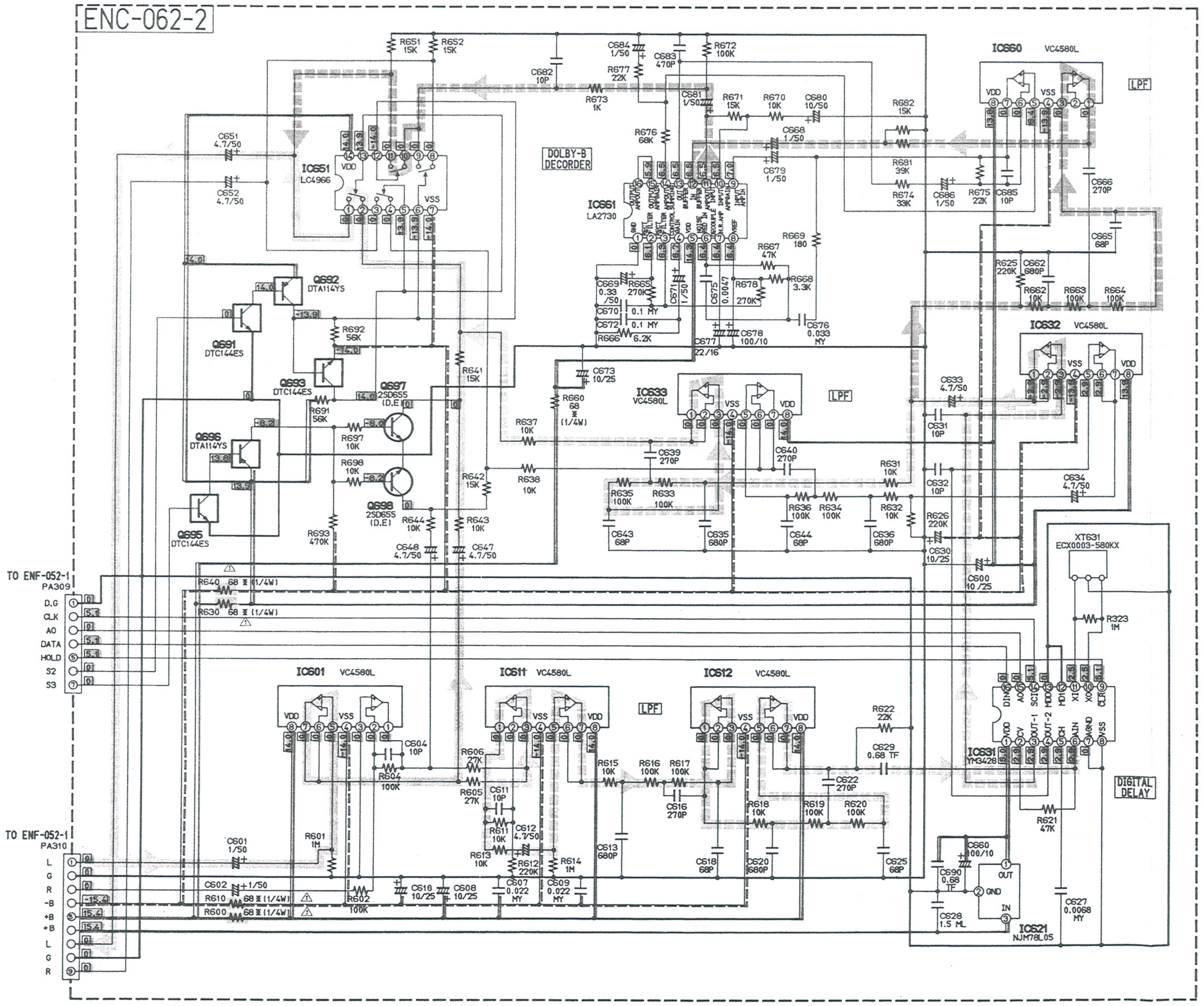
※ MARK

	J.C	U	E.BS.A	G
	UNF.C.	UNF.C.	UNF.F.	UNF.F.
R385.386	UNF.C.	UNF.C.	UNF.F.	UNF.F.
R531.532	UNF.C.	UNF.C.	UNF.F.	UNF.F.
R569.570	UNF.C.	UNF.C.	UNF.F.	UNF.F.
R581.582	UNF.C.	UNF.C.	UNF.F.	UNF.F.
C323~332	NONE	NONE	NONE	USED
C335.336	NONE	NONE	NONE	USED
C585.586	NONE	NONE	NONE	USED
C589~592	NONE	NONE	NONE	USED
C595~598	NONE	NONE	NONE	USED
R315.316	UNF.C.	UNF.C.	UNF.F.	UNF.F.
R323.324	220	220	220	2.2K
R327.328	220	220	220	2.2K
C323-332	NONE	NONE	NONE	USED
C335.336	NONE	NONE	NONE	USED
R583.584	220	220	220	2.2K
R587.588	220	220	220	2.2K

Notice: 1. ▨ indicates signal path. 2. ▨ indicates signal path for SEA 3. ▨ indicates signal path for REAR

Power Supply & Surround Section


POWER SUPPLY
(U) FOR OTHER COUNTRIES
(J.C) FOR USA & CANADA AC120V 60HZ
LE.G.LBS.A (E) FOR EUROPE (A) FOR AUSTRALIA (G) FOR WEST GERMANY (LBS)FOR U.K. AC220V 50HZ AC240V 50HZ
POWER TRANSFORMER
END-054-4
END-054-2
ENH-125-1
AC OUTLETS SWITCHED
TO END-054-1
TO ENB-085-4
AC110V
AC120V
AC220V
AC240V

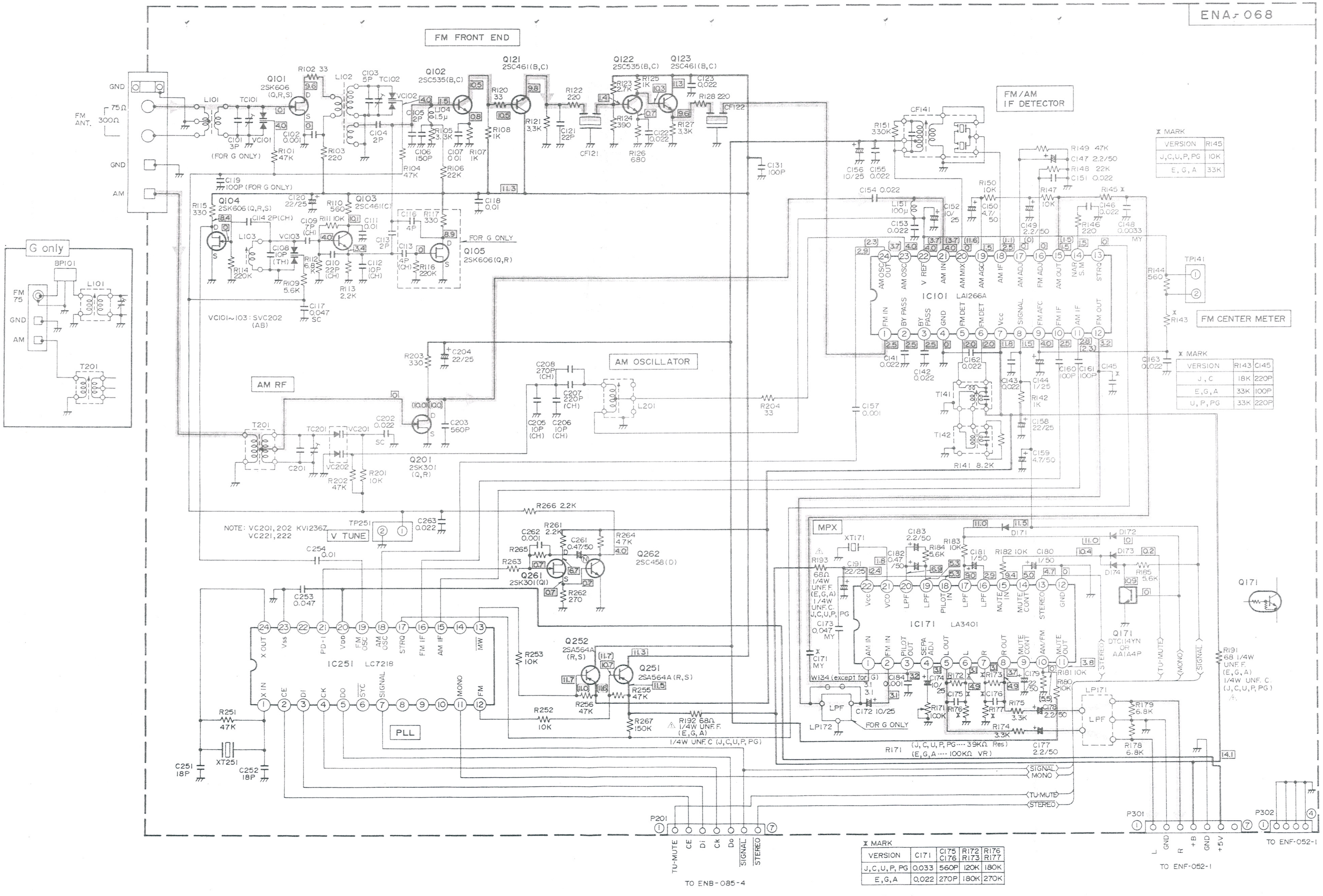

ENC-062-2
IC651 LC4966
IC661 LA2730
DOLBY-B DECORDER
IC660 VC4580L
IC632 VC4580L
IC633 VC4580L
IC601 VC4580L
IC611 VC4580L
IC612 VC4580L
LPF
IC631 YM3428
DIGITAL DELAY
XT631 ECX0003-580KX
IC621 NJM78L05
TO ENF-052-1 PA309
TO ENF-052-1 PA310

	J.C.U.P.PG	A.LE.LBS.G
R600	UNF.C.	UNF.F.
R610	UNF.C.	UNF.F.
R630	UNF.C.	UNF.F.
R640	UNF.C.	UNF.F.
R660	UNF.C.	UNF.F.

Notes:

1. ━━━ indicates +B power supply.
2. ‑ ‑ ‑ indicates −B power supply.
3. ▨ indicates signal path.
4. ▨ indicates signal path for surround (STADIUM)
5. ▪ ▪ ▪ indicates signal path for surround (HALL)
6. ▪ ▪ ▪ indicates signal path for surround (DOLBY)
7. ▭ shows DC voltage to the chassis with no signal input.
8. When replacing the parts in the darkened area (▨) and those marked with ⚠, be sure to use the designateb parts to ensure safety.
9. This is the standard circuit diagram.
   The design and contents are subject to change without notice.

■ Tuner Section


ENA-068
FM FRONT END
FM/AM IF DETECTOR
FM CENTER METER
AM OSCILLATOR
AM RF
MPX
PLL
V TUNE
G only
FM ANT. 75Ω 300Ω
GND
AM
Q101 2SK606(Q,R,S)
Q102 2SC535(B,C)
Q121 2SC461(B,C)
Q122 2SC535(B,C)
Q123 2SC461(B,C)
Q103 2SC461(C)
Q104 2SK606(Q,R,S)
Q105 2SK606(Q,R)
Q201 2SK301 (Q,R)
Q252 2SA564A (R,S)
Q251 2SA564A (R,S)
Q261 2SK301(Q)
Q262 2SC458(D)
Q171 DTC114YN OR AA1A4P
IC101 LA1266A
IC171 LA3401
IC251 LC7218
CF121
CF122
CF141
VC101~103 : SVC202 (AB)
NOTE: VC201, 202 KV1236Z VC221, 222
FOR G ONLY
P201
P301
P302
TO ENB-085-4
TO ENF-052-1
TO ENF-052-1
TU-MUTE
CE
DI
CK
DO
SIGNAL
STEREO
L
GND
R
+B
GND
+5V

X MARK

VERSION	R145
J,C,U,P,PG	10K
E, G, A	33K

X MARK

VERSION	R143	C145
J , C	18K	220P
E,G,A	33K	100P
U, P, PG	33K	220P

X MARK

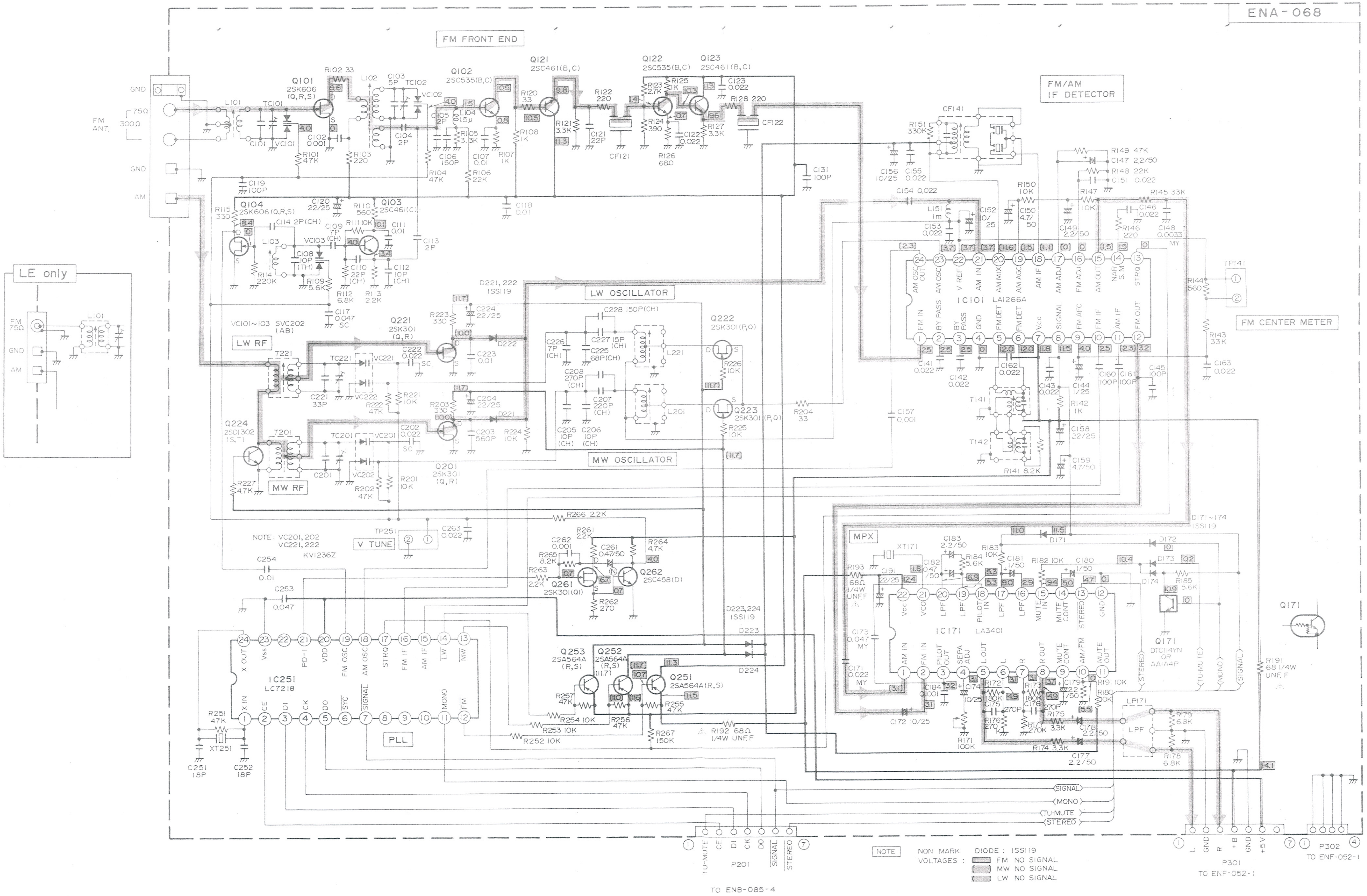
VERSION	C171	C175 C176	R172 R173	R176 R177
J,C,U,P,PG	0.033	560P	120K	180K
E,G,A	0.022	270P	180K	270K

NOTE NON MARK DIODE : 1SS119

VOLTAGES : ▭ FM NO SIGNAL

( ) AM NO SIGNAL

■ Tuner Section


ENA-068
FM FRONT END
FM/AM IF DETECTOR
LW OSCILLATOR
MW OSCILLATOR
LW RF
MW RF
MPX
PLL
LE only
FM CENTER METER
V TUNE
TP251
TP141
GND
FM ANT.
75Ω
300Ω
AM
Q101 2SK606 (Q,R,S)
Q102 2SC535(B,C)
Q121 2SC461(B,C)
Q122 2SC535(B,C)
Q123 2SC461(B,C)
Q103 2SC461(C)
Q104 2SK606(Q,R,S)
Q221 2SK301 (Q,R)
Q222 2SK301(P,Q)
Q223 2SK301(P,Q)
Q224 2SD1302 (S,T)
Q201 2SK301 (Q,R)
Q261 2SK301(Q1)
Q262 2SC458(D)
Q251 2SA564A(R,S)
Q252 2SA564A (R,S)
Q253 2SA564A (R,S)
Q171 DTC114YN OR AA1A4P
IC101 LA1266A
IC171 LA3401
IC251 LC7218
CF121
CF122
CF141
XT171
XT251
VC101~103 SVC202 (AB)
NOTE: VC201,202 VC221,222 KV1236Z
D221,222 1SS119
D223,224 1SS119
D171~174 1SS119
P201
TO ENB-085-4
P301
TO ENF-052-1
P302
TO ENF-052-1
TU-MUTE
CE
DI
CK
DO
SIGNAL
STEREO
MONO
L
GND
R
+B
+5V
NOTE
NON MARK VOLTAGES :
DIODE : 1SS119
FM NO SIGNAL
MW NO SIGNAL
LW NO SIGNAL